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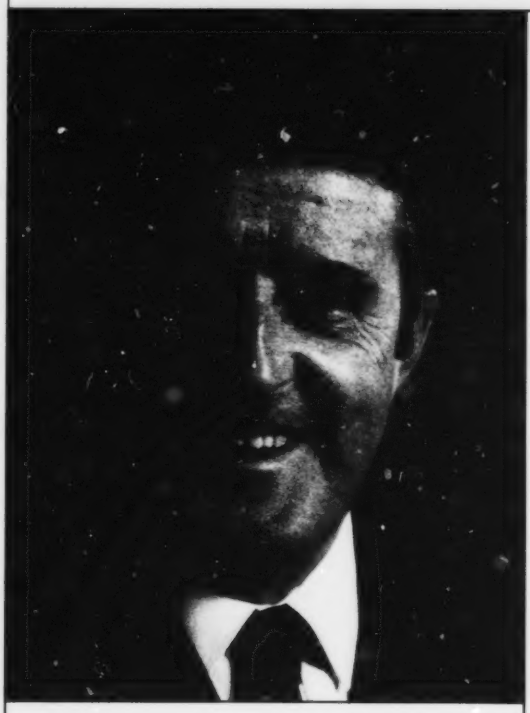
CHALLENGE AND COMMITMENT

A Defence Policy for Canada

National Defence Défense nationale



No Government has a more important obligation than to protect the life and well-being of its people; to safeguard their values and interests. In Canada, it is time to renew that commitment.

The world has changed dramatically since the last review of Canadian defence policy. But certain truths endure. As we seek new ways to put East-West relations on a more stable footing, we must remind ourselves that stability cannot be achieved through idle dreams. Peace and stability must be earned, and earned constantly.

For Canada, this quest continues to be best pursued through co-operation with our allies. This is a recognition of our common history, our shared interests and our community of values. This unity of purpose is the very foundation of our Alliance, as important to our security as the concrete efforts we undertake to keep the peace.

Our commitments reflect a sober recognition that Canada's survival and prosperity depend not only on what we do at home but on the well-being and security of the West as a whole. This White Paper responds to this reality by upgrading and consolidating our efforts to meet present circumstances and those of the future, into the next century.

But just as the Alliance can only prosper through shared effort and a common impulse, so too Canada must look to itself to safeguard its sovereignty and pursue its own interests. Only we as a nation should decide what must be done to protect our shores, our waters and our airspace. This White Paper, therefore, takes as its first priority the protection and furtherance of Canada's sovereignty as a nation.

I am confident that the measures outlined here will restore to the Canadian Forces a sense of direction and a pride born of noble purpose. Canadians will be able to hold their heads high in the knowledge that we are meeting our responsibilities to ourselves and to our children. Canada will have honoured its commitment.

Prime Minister of Canada

Shortly after the Prime Minister asked me to become Minister of National Defence, I had the pleasure of meeting with a group of young Canadian Forces officers stationed in Germany.

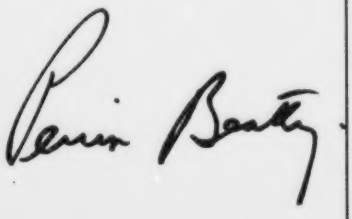
These dedicated young Canadians, who will help to form the next generation of our country's military leadership, were candid about what they looked for from their Government. They listed four goals:

- Honesty. A frank admission that the Forces had to deal with serious problems which would take time to overcome.
- A contemporary and manageable mandate. A clear statement of what their Government expected them to do.
- The resources necessary to do the job, and,
- Perhaps most important of all, the clear moral support of Canadians for their work on behalf of Canada.

I agree fully with those priorities. This new defence policy, the first in 16 years, provides a modern and realistic mandate to the Canadian Forces and commits the Government to giving the Forces the tools to do the job.

For much of the 1960s and 1970s, Canada's security and our defence relationship with the other democracies were given a low priority by the Federal Government. The Forces were cut in size and much of their equipment was allowed to become obsolete. As a result, Canada's security and sovereignty were seriously weakened and both our allies and potential opponents received mixed signals about our reliability as a NATO partner.

The challenges Canadians must face between now and the next century go to the survival of humanity itself and to whether Canada will continue as a free and independent country. The new defence policy outlined in this White Paper will help ensure for our children a sovereign and free Canada in a more peaceful world.



June 1987

Minister of National Defence

Maps, Charts and Tables

The International Environment 4
Strategic Nuclear Forces 9
Conventional Forces in the NATO Area 12
The Maritime Dimension 13
Conventional Forces in Central and Northern Europe 21
Canada's Contribution to Peacekeeping 25
Forces in Canada 28
Maritime Forces 30
Land Forces 33
Air Forces 37
Canada's Defence Effort 44
Capital Program 45
Canada's Comparative Defence Effort–1985 46
Sea Ice Coverage 52
Fleet Composition 53
Air Defence Surveillance Plan 57
Consolidation in Europe 64
Regular and Reserve Personnel 67
Jobs in the Private Sector (1985/86) 83
Examples of Jobs Generated by Defence Projects 84

Table of Contents

I	**Introduction**	1
II	**The International Environment**	5
III	**The Military Threat**	9
	North America	10
	Europe	12
IV	**Canadian Defence Policy**	17
	Strategic Deterrence	17
	Conventional Defence	19
	Sovereignty	23
	Peacekeeping	24
	Arms Control	26
V	**The Structure of the Forces**	29
	Maritime Forces	30
	Land Forces	33
	Air Forces	37
	Support Forces	40
VI	**The Commitment — Capability Gap**	43
VII	**The Way Ahead**	49
	Three Oceans	49
	Surveillance	55
	Territorial Defence	60
	Consolidation in Europe	60
	The Reserves	65
	Funding the Defence Program	67
VIII	**Foundations for Defence**	69
	Command and Control	69
	Mobilization Planning and Preparedness	71
	New Emergencies Legislation	73
	Defence Industrial Preparedness	74
	Research and Development	77
IX	**The Armed Forces and Society**	81
	Defence and the Economy	83
	Search and Rescue	85
	Foreign Disaster and Humanitarian Relief	86
	Assistance to Civil Authorities and Civilian Organizations	87
	Cadets	88
X	**Conclusion**	89

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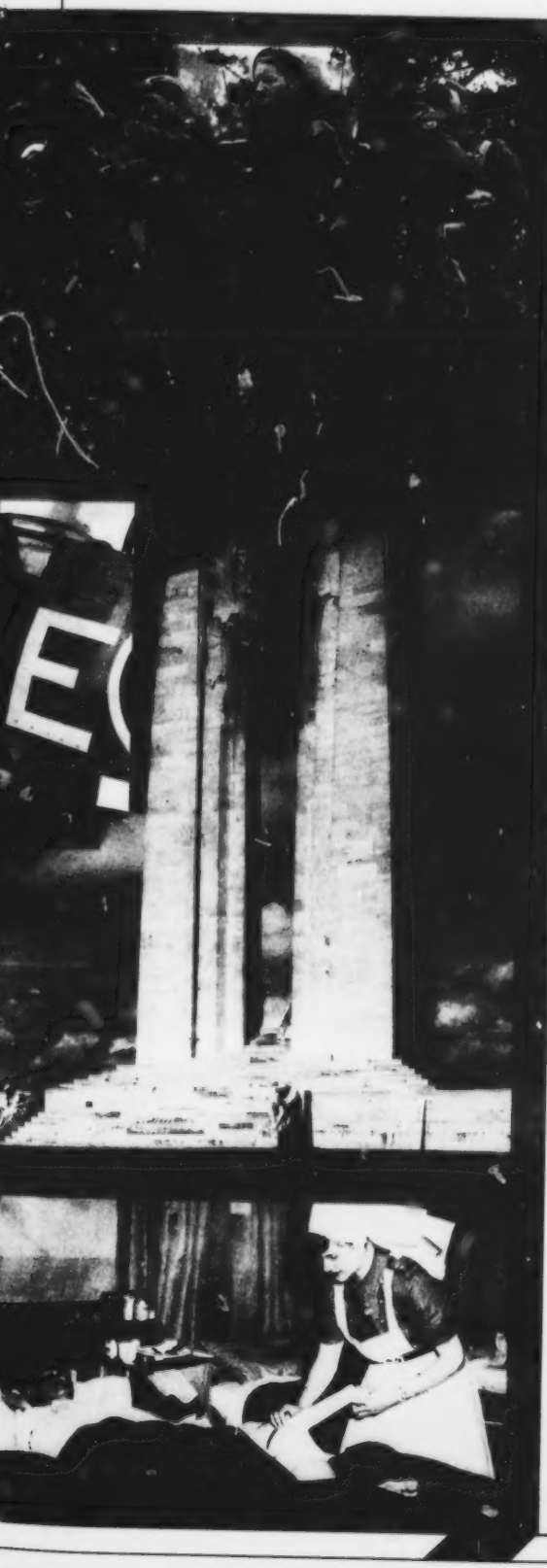
I Introduction



The last White Paper on defence was issued in August, 1971. It followed on the heels of a review of foreign and defence policy that had occurred in 1968-69. That review had resulted in major reductions in the Canadian Forces, reductions of lasting effect. The only Canadian aircraft carrier, the HMCS BONAVENTURE, was sold in 1970. The Canadian Forces in Europe were cut in half. The regular strength of the Canadian Forces was reduced by about 17,000. In 1967-68, about 18 per cent of the federal budget and 2.5 per cent of the Gross Domestic Product were devoted to defence. By 1971-72, these had been cut to 13 and 2 per cent, respectively.

The 1971 White Paper outlined the assumptions underlying these reductions and set the direction of policy for the future. Seen in the context of the early 1970s, it was, not surprisingly, an optimistic document that looked forward to a world in which military forces would be less relevant, at least in their traditional roles. The paper took comfort in the increasing stability of mutual deterrence between the superpowers based on an approximate parity in nuclear weapons. It saw in arms control great promise for the reduction of arms at both the nuclear and conventional levels. Citing the emergence of China as a nuclear power and the economic growth of both Europe and Japan, it anticipated a multipolar world in which power would be more diffuse and the superpowers would play less significant roles. It looked with great optimism to a future in which negotiation would resolve problems in East-West relations. This rather benign view of the world, characteristic of a period in which détente was the watchword, was offset by a real concern for internal security and social stability which obviously reflected the domestic turmoil that Canada had just experienced.

Sixteen years later, it is evident that the great hopes of the early 1970s have not been realized. As anticipated, stable mutual deterrence between the superpowers has endured, although at much higher levels of forces. The promise of arms control, as envisaged in 1971, seemed to be vindicated in the immediately ensuing years. Indeed, considerable progress was made, most notably the signing in 1972 of the first Strategic Arms Limitation Treaty (SALT I) which included the Anti-Ballistic Missile (ABM) Treaty. Despite some initial successes, however, arms control has so far proven to be much more difficult to achieve than many had anticipated. The Mutual and Balanced Force Reductions (MBFR) talks, for example, already envisaged in 1971, have made virtually no progress.

As expected, developments in Europe and the Far East have led to a greater diffusion of power. The change, however, has not been such as to alter perceptibly the central fact of confrontation in East-West relations.

Developments during the late 1970s and the 1980s have shown that the early promise of détente was exaggerated. Events have not justified the optimism of the early 1970s that problems of East-West relations would be resolved by negotiation. While the nations of East and West have not used force directly against one another to resolve their differences, neither have they been quick to negotiate them away. Elsewhere in the world, differences between nations have been even less amenable to negotiation. Far too often, military force or the threat of military force has been the preferred tool for achieving political objectives.

The optimism of that earlier White Paper 16 years ago reflected the same hope for international peace and security which is shared by all Canadians today. The realities of the present, however, call for a more sober approach to international relations and the needs of security policy.

HMCS NIPIGON joined the Fleet in 1964.

The recently acquired CF-18 is a state-of-the-art fighter aircraft.

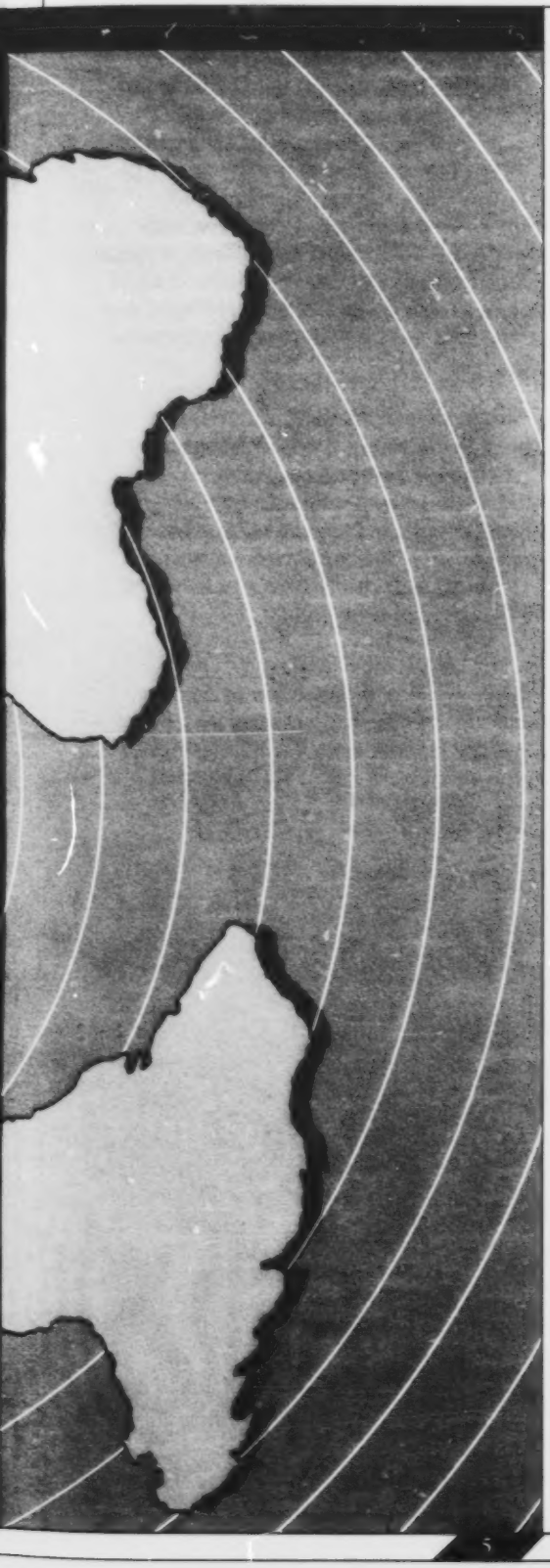
While Canadian security policy must be flexible enough to adapt to changing circumstances, some elements of our geostrategic situation are immutable. There is no external threat which is unique to Canada. Canada alone cannot assure its own security. As the neighbour of two heavily armed superpowers and as a country that depends on international relationships for its well-being and prosperity, if not for its survival, Canada's security ultimately requires the maintenance of a peaceful international order. In an age when a breakdown of that order could result in a nuclear holocaust, its importance is self-evident.

The first objective of Canada's security policy is to promote a stronger and more stable international environment in which our values and interests can flourish. It does so within the framework of collective security. Like each of its predecessors, this Government believes wholeheartedly that there is no acceptable alternative and rejects as naive or self-serving the arguments of those who promote neutrality or unilateral disarmament. Canada has never been neutral. We have always sought our security in a larger family of like-minded nations. In light of our position in the world, the values and traditions which have been defended steadfastly by previous generations of Canadians, and our political and economic interests, neutrality would be hypocrisy. Our security would continue to depend on the deterrence provided by our former allies, but we would have opted out of any contribution to and, equally significantly, any say in the management of that deterrent. We could turn our backs on the obligation to work for a stable world order; technology and geography would not, however, allow us to escape the consequences should that order collapse.

Canadian security policy has three major components: defence and collective security, arms control and disarmament and the peaceful resolution of disputes. This White Paper deals with the contribution of the Department of National Defence and the Canadian Forces to all aspects of that policy.

THE INTERNATIONAL ENVIRONMENT
North Atlantic Alliance
Warsaw Pact

II The International Environment



Canadian security policy must respond to an international environment dominated by the rivalry between East and West. These two groups of nations, each led by a superpower, are in conflict, a conflict of ideas and values. They are divided on how politics should be conducted, society ordered and economies structured. They are divided on the value of personal freedom, on the importance of the rule of law and on the proper relationship of the individual to the society. In this conflict, Canada is not neutral. Our values and our determination to defend freedom and democracy align us in the most fundamental way with other Western nations.

While the conflict between East and West is not intrinsically military, it could lead to a clash of arms. For its part, the West would resort to armed force only in its own defence. Although some would say that the same is true of the East, can Western governments responsibly base the well-being and future of their own people on expressions of goodwill and on the most optimistic interpretation of the intentions of others? It is a fact, not a matter of interpretation, that the West is faced with an ideological, political and economic adversary whose explicit long-term aim is to mould the world in its own image. That adversary has at its disposal massive military forces and a proven willingness to use force, both at home and abroad, to achieve political objectives. Perhaps this is a reflection of a deep-rooted obsession with security, well-founded on the bitter lessons of Russian history. It cannot but make everyone else feel decidedly insecure. This does not mean that war with the Soviet Union is inevitable or that mutually beneficial arrangements should not be pursued. It does mean that unless and until there is concrete progress, the West has no choice but to rely for its security on the maintenance of a rough balance of forces, backed up by nuclear deterrence.

Central Europe is the geographic focus of the wider contest between East and West. It is the centre of gravity in the balance of power. The greatest concentration of military force is found here. Since the Second World War, the Soviet Union has maintained in Central Europe massive armed forces well in excess of what is reasonable for defence alone. The Western response has been to deploy forces sufficient at least to deny the Soviet Union the prospect of an easy victory. Europe is not necessarily the most likely place for a conventional conflict between East and West to begin, but it would quickly become the decisive battlefield.

A free and secure Western Europe remains critical to Canada's future. Canadian history and values owe an enormous debt to Europe. For centuries it has been the centre of the civilization of which we are a part. Not surprisingly, Canada has political, cultural and social ties with Europe unmatched by those with any other part of the world, save the United States.

Western Europe represents one of the greatest concentrations of the human and material resources of the larger community of Western nations, about one half of the population and one third of the annual gross national product. The fact that about one third of Canada's overseas trade is conducted with Western Europe is only one indicator of its importance to us.

Were Western Europe to be subverted, overrun or destroyed, what remained of the West would face a bleak future. It is difficult to imagine what place Canada would have in such a world. The context in which this nation seeks its destiny would be diminished in every respect and the most profound concerns about Canada's future as an independent nation would arise.

Canada's security in the broader sense is inseparable from that of Europe. There is nothing new in this reality. Twice in this century Canadians have fought in Europe for their freedom. Following the Second World War, successive Canadian governments have recognized the need to remain intimately engaged in European security issues. The presence of Canadian armed forces in Western Europe contributes directly to the defence of Canada, and, what is more, ensures that we will have a say in how key security issues are decided.

Canadian defence policy must also take into account the growing importance of the Asia-Pacific region. This region has, in the recent past, been undergoing more rapid change than any other part of the world. Here too, vast armed forces confront each other, particularly along the Sino-Soviet border and the Korean armistice line, while growing naval forces patrol the North Pacific. Japan may now match the Soviet Union as the world's second-largest economy. It rivals the United States in per capita income, in high technology and as the world's largest exporting nation. Japan is Canada's second-largest trading partner and a leading investor in Canada.

The Arctic Ocean, lying between the two superpowers, is also an area of growing strategic importance. In the past it served as a buffer between the Soviet Union and North America. Technology, however, is making the Arctic more accessible. Canadians cannot ignore that what was once a buffer could become a battleground.

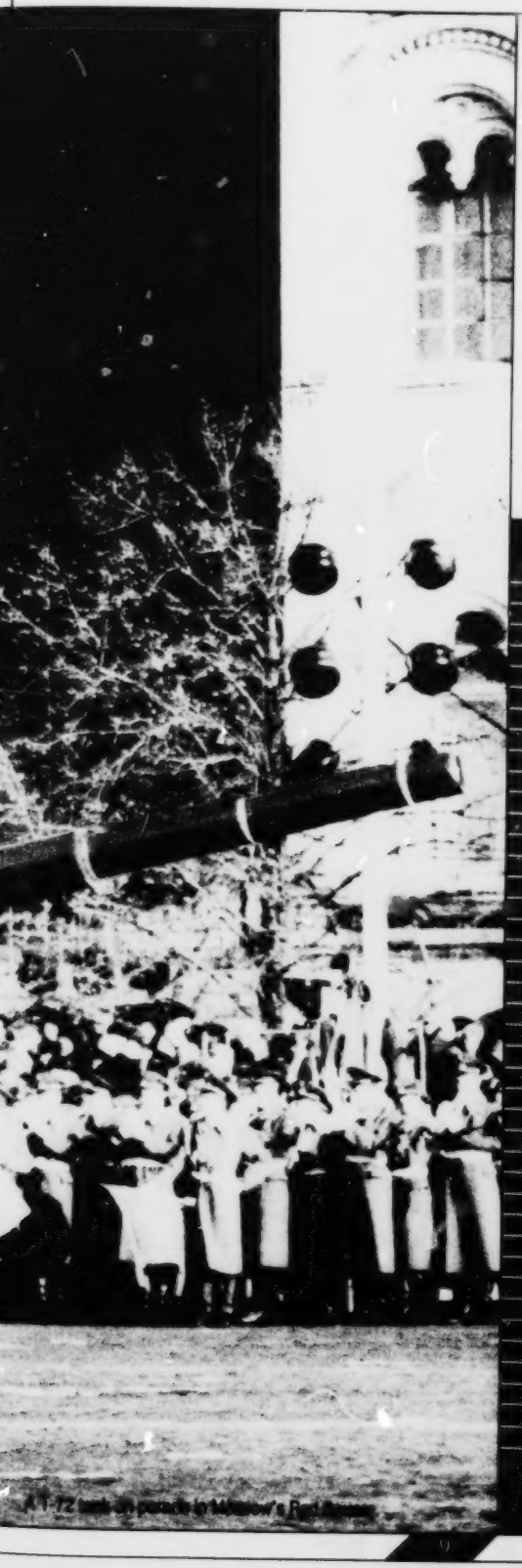
Many parts of the world are plagued by instability and regional conflict brought about by ideological quarrels, racial strife, terrorism, territorial disputes and religious militancy. A regional conflict could provide the spark for a global conflagration. That is why Canada's security requires a forceful and effective Canadian contribution to the peaceful resolution of disputes and to peacekeeping operations.

The Canadian government considers arms control essential to the search for a more peaceful and secure world. It offers the prospect of reducing threats, constraining the competition for military advantage, increasing stability and providing a predictable international environment. Current negotiations could lead to significant reductions in nuclear weapons, conventional forces and chemical weapons, as well as to agreements on other measures to build confidence and reduce tension. All of these possibilities are important, desirable and worthy of energetic pursuit. Progress, however, is slow and unpredictable, and there is no reason to believe that in the near future it will obviate the need for significant military forces or for deterrence based ultimately on nuclear weapons. Indeed, by increasing the need for adequate conventional forces, some of the more promising developments in arms control, such as nuclear reductions in Europe, could make Canada's contribution to collective security even more important.

Success in building a more peaceful world will lead to a reduction in the level of armaments. Until these endeavours are crowned with much greater success than has been enjoyed to date, the Government must ensure this country's security both at home and through contributions to collective defence efforts abroad.

The Berlin Wall is not only a barrier but a grim reminder of the profound differences between East and West.

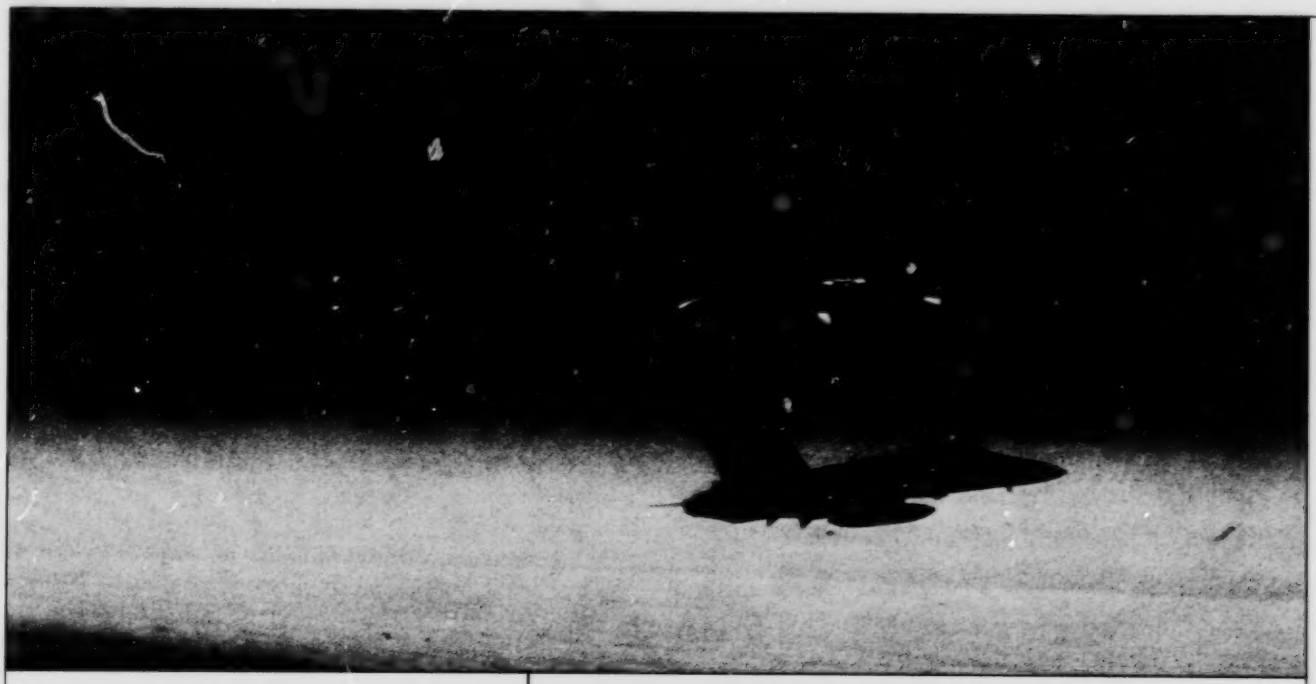
III The Military Threat



A T-72 tank on parade in Moscow's Red Square

Since the end of the Second World War, the Soviet Union has persistently expanded its military power. At the expense of the civilian economy, it has devoted vast resources to its armed forces. The result is a military establishment that has reached rough parity with the United States in strategic weapons while maintaining numerical superiority over Allied conventional forces in Europe. During the same period, it has transformed its fleet from a defensive coastal force to a powerful navy with global reach. The Soviet Union has further increased its military potential through its sponsorship and dominance of the Warsaw Pact.

STRATEGIC NUCLEAR FORCES



A CF-18 intercepts a Soviet Bear H bomber, an aircraft capable of carrying long-range cruise missiles.

North America

The principal direct threat to Canada continues to be a nuclear attack on North America by the Soviet Union. Because of our geographic position, Soviet strategic planners must regard Canada and the United States as a single set of military targets no matter what political posture we might assume. Even in the unlikely event that the United States alone were attacked, geographic proximity and common interests would ensure that the effect on Canada would be devastating. Today, Soviet land-based intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) represent the most significant threat. Their accuracy and range enable the Soviet Union to inflict enormous damage on any target, anywhere in the world.

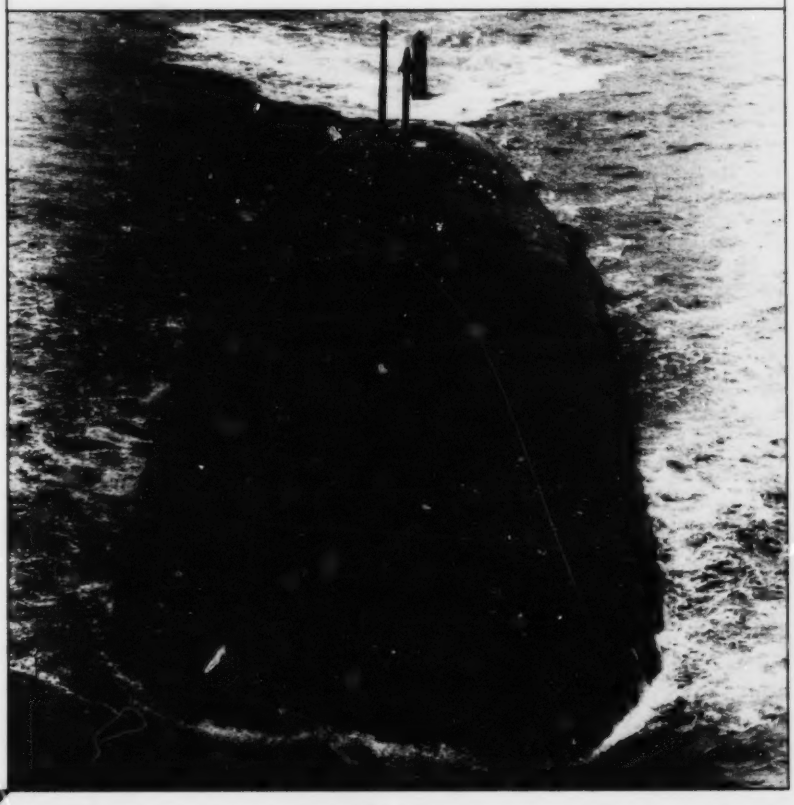
A threat to North America from manned bombers has existed for many years. More recently, Soviet bombers have gained new importance with the development and production of new models equipped with air-launched, long-range, land-attack cruise missiles (ALCMs). These cruise missiles could be launched in airborne nuclear strikes against North America from points well off the Atlantic and Pacific coasts, and from the Canadian Arctic. Anticipated improvements in cruise missile performance will make defending North America even more difficult.

Soviet bombers would acquire greater relative importance should an effective ballistic missile defence be deployed or should the superpowers agree to reduce drastically or even eliminate ballistic missiles from their arsenals. The deployment by the United States of even a partial ballistic missile defence system could lead the Soviet Union to counter, in part, by increasing its strategic bomber force.

The Soviet Union is expected to broaden its range of nuclear capabilities with the deployment in submarines of sea-launched, long-range, land-attack cruise missiles (SLCMs). Launched from offshore as far north in the Atlantic as the Labrador Sea, or in the Pacific, Soviet sea-launched cruise missiles could strike any military or industrial target in either Canada or the United States.

Although Canada is unlikely to be invaded in a conflict, limited incursions, principally to neutralize installations, or for diversionary purposes, are conceivable. Canadian airspace would almost certainly be used by manned bombers armed with cruise missiles, and, of course, space above Canada could be traversed by ballistic missiles. Canadian Arctic waters could well provide an alternate route for Soviet submarines to move from the Arctic Ocean to the Atlantic to reach cruise missile firing positions further south or to operate in more traditional roles against vital Allied shipping.

The military use of space by the Soviets has increased significantly and they now maintain about 150 operational satellites in orbit. Over 90 per cent of those satellites have military or military-related missions, including intelligence collection over Canada.



Soviet nuclear submarines of the OSCAR class carry anti-ship cruise missiles.

Europe

The Soviet Union and its Warsaw Pact allies also threaten Canadian security with their nuclear and conventionally armed forces concentrated in the European theatre. These forces are larger than defence alone requires. In numbers of theatre nuclear-capable weapons, the Soviet Union has a decided edge. For example, the Warsaw Pact has about a three-to-one advantage over the North Atlantic Treaty Organization (NATO) in theatre nuclear ballistic missiles. At the conventional level, the Warsaw Pact maintains numerically superior forces, including about a three-to-one ratio in artillery and armed helicopters, a two-to-one ratio in main battle tanks and tactical aircraft and a similar superiority in most other categories. The Soviets and their allies also maintain a large stockpile of chemical weapons and a well-developed military capability to operate in a toxic environment. Only in the area of transport helicopters does NATO outnumber the Warsaw Pact. Confronting Western Europe as a whole are about 90 Warsaw Pact divisions. More than 2.5 million men and about 47,000 tanks stand ready for employment with minimal mobilization.

Opposite the NATO area where Canadian forces are currently committed, the northern and central regions, the Warsaw Pact can readily deploy some 64 divisions, against 26 for NATO. While the Warsaw Pact would be able to select the time and place of attack and concentrate its forces accordingly, NATO, as the defender, would be obliged to thin out its divisions across the entire front. Under these circumstances, NATO maintains forces barely sufficient to cover the ground. Furthermore, the Warsaw Pact has a geographic advantage, as NATO suffers from a lack of strategic depth, and from the need for resupply and reinforcement from across the Atlantic.

CONVENTIONAL FORCES IN THE NATO AREA

		NATO[a]	WARSAW PACT
GROUND FORCES	Divisions[b]	38	90
	Manpower[c]	1,900,000	2,700,000
	Main Battle Tanks	20,000	47,000
	Artillery[d]	9,000	24,000
	Armed Helicopters	700	2,100
NAVAL FORCES[e]	Principal Surface Combatants[f]	321	196
	Attack Submarines	173	192
AIR FORCES	Land Combat Aircraft[d]	3,250	5,300

Source: The International Institute for Strategic Studies, *The Military Balance, 1986-87*. Numbers are rounded.

a. Excludes France and Spain which do not participate in NATO's integrated military structure. (French army stationed in Federal Republic of Germany is included).

b. While Warsaw Pact and NATO divisions differ, they have overall firepower equivalence. Only active divisions have been included.

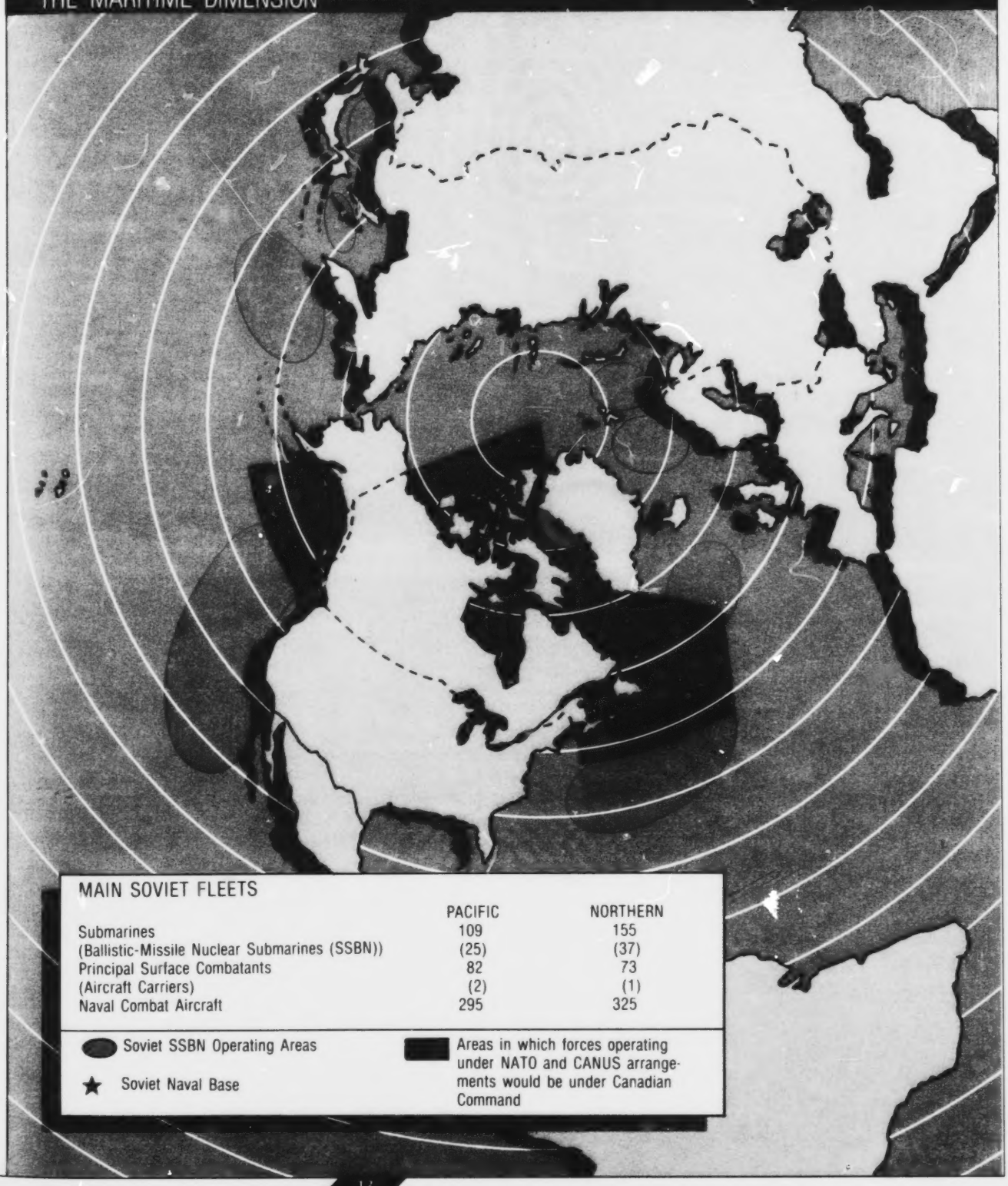
c. Manpower figure is for total ground forces in Europe.

d. Many artillery pieces and aircraft are technically dual-capable, even though operationally they may not be assigned a nuclear role.

e. Includes NATO naval forces on both sides of the Atlantic.

f. Light frigates (1,000 tons) and larger ships.

THE MARITIME DIMENSION



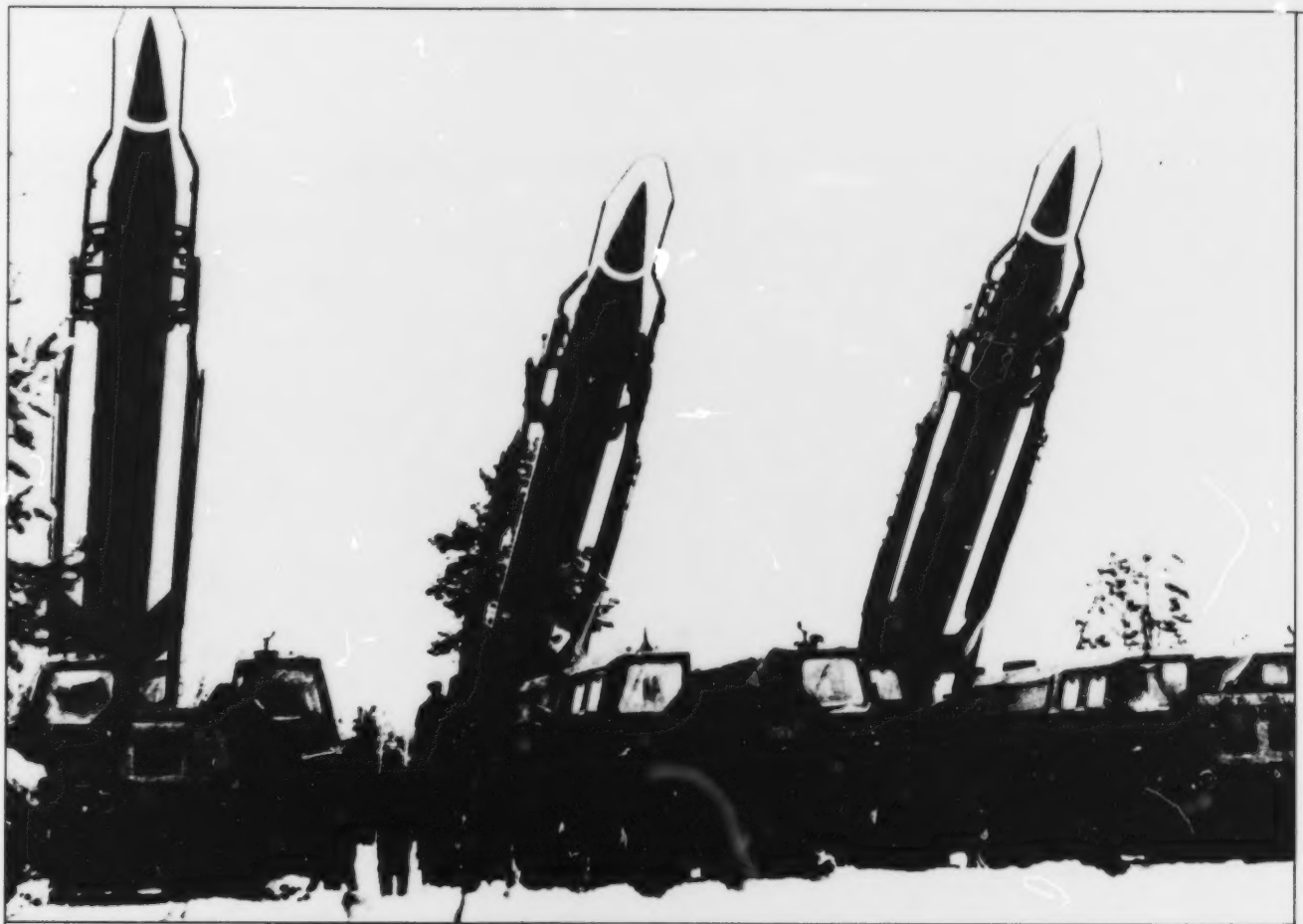
MAIN SOVIET FLEETS

	PACIFIC	NORTHERN
Submarines	109	155
(Ballistic-Missile Nuclear Submarines (SSBN))	(25)	(37)
Principal Surface Combatants	82	73
(Aircraft Carriers)	(2)	(1)
Naval Combat Aircraft	295	325

Soviet SSBN Operating Areas

Soviet Naval Base

Areas in which forces operating under NATO and CANUS arrangements would be under Canadian Command



The Soviet SCUD-B surface-to-surface missile has a range of 300 km, is capable of launching nuclear, chemical or conventional warheads and is in service throughout the Warsaw Pact.

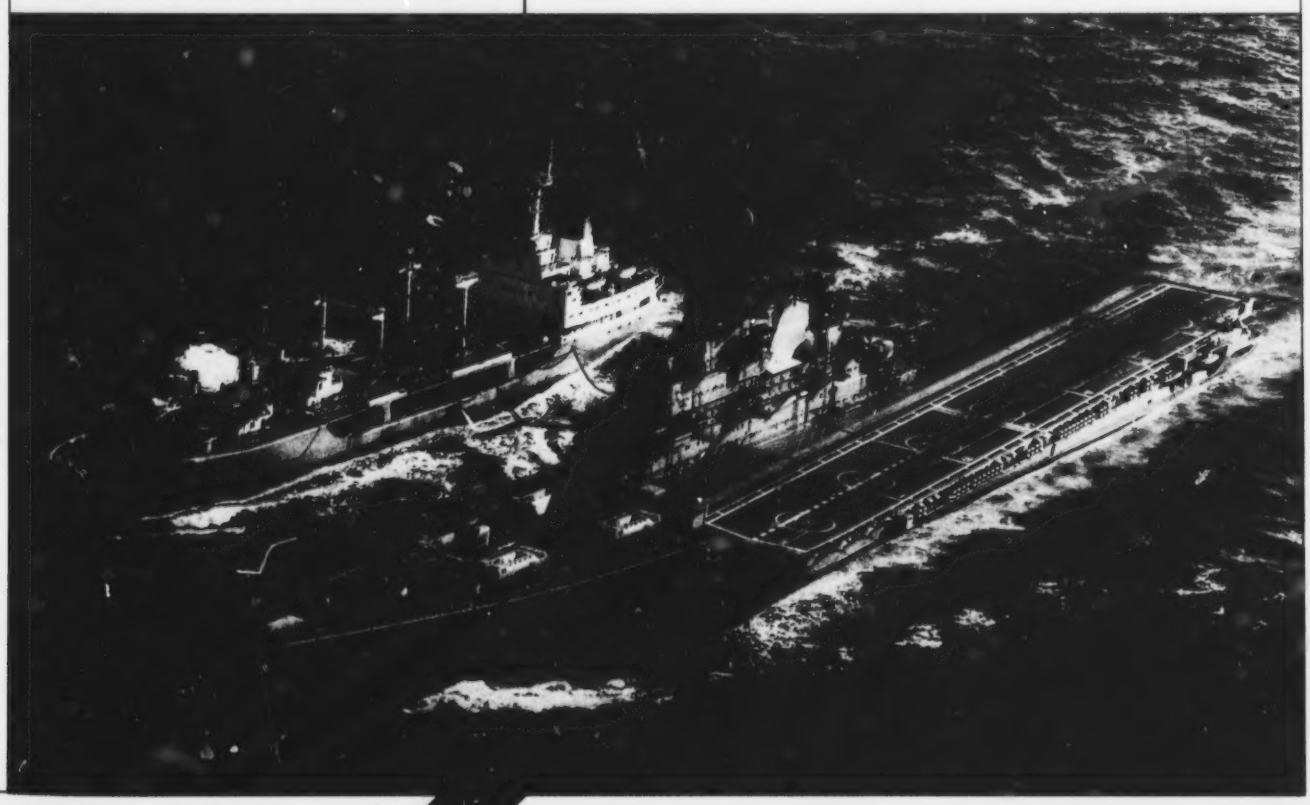
In the event of war, the Warsaw Pact could be expected to use its superior numbers to overwhelm NATO defences. In the past, NATO has been able to rely on its qualitative lead in weapons technology to compensate somewhat for the greater number of Warsaw Pact troops and equipment. As the Soviet Union continues to modernize its forces, NATO's margin of qualitative superiority is being eroded. This is particularly noticeable in tactical aircraft and tanks.

The build-up of the surface navy of the Soviet Union, both in quality and quantity over the last 20 years, has been unprecedented. It has introduced new classes of warships, like the modern KIEV class carriers, SLAVA class guided-missile cruisers, and SOVREMENNYY and UDALOY class guided-missile destroyers, and, in a striking new departure in naval policy, is now building larger aircraft carriers. All of the Soviet nuclear-powered submarines, both ballistic-missile and attack, are assigned to the two main Soviet fleets, the Northern and the Pacific. The Northern Fleet is the more important in terms of its roles, and would have a major impact on any war in Europe. Based in the Kola Peninsula, it operates extensively in the Arctic and in the Atlantic. Accordingly, 60 per cent of Soviet ballistic-missile nuclear submarines and about two thirds of their nuclear-powered attack submarines are allocated to the Northern Fleet. The Pacific Fleet has been significantly upgraded in the

past decade and a half. Based principally in Vladivostok and Petropavlovsk, the Pacific Fleet makes its presence felt off the West Coast of Canada through regular patrols of ballistic-missile submarines and intelligence gathering ships, and through less regular eastern Pacific operations by surface ships and attack submarines.

The new Soviet leadership continues to view the world as divided into two antagonistic camps. There is every reason to believe that its long-term aims continue to include the dissolution of NATO, the neutralization of non-communist Europe and the weakening of the West as a whole. Although the Soviet Union fully recognizes the dangers of aggression against NATO, it continues to seek to translate military power into political gain.

A 37,000 ton KIEV class aircraft carrier being replenished in the Pacific typifies the growing ability of the Soviet Navy to operate effectively in all of the world's oceans.



IV Canadian Defence Policy

Canada has no aggressive intentions toward any country. Our objective is to deter the use of force or coercion against Canada and Canadian interests and to be able to respond adequately should deterrence fail. Such deterrence requires standing and reserve forces equipped, trained and positioned to meet any likely threat. Canada's population and resource base are not today and in the foreseeable future could not become sufficient to defend, unaided, the second-largest country in the world. The Government believes that this objective can only be met within the collective security framework provided by the North Atlantic Treaty Organization.

Strategic Deterrence

As previously noted, the most serious direct threat to Canada is a Soviet nuclear attack on North America. Given the present balance of strategic nuclear forces, such an attack remains unlikely. Were it to occur, however, the consequences would be catastrophic. At present, the only effective counter to such a threat is a strategy of deterrence based on the maintenance of diversified nuclear forces. Such forces must be capable of surviving an attack and retaliating in a manner so devastating as to convince any potential aggressor that the penalty he risks incurring far outweighs any gain he might hope to achieve. Each superpower now has the capacity to obliterate the other, even after having absorbed a nuclear strike. For that reason, the structure of mutual deterrence today is effective and stable. The Government believes that it must remain so.

Canada does not have nuclear weapons. We have no intention of acquiring them. To deter a nuclear attack on Canada we rely on the nuclear forces of our allies. For that reason, we support the maintenance of such survivable nuclear forces as are necessary for stable and effective deterrence.

Even without nuclear weapons, Canada contributes and will continue to contribute to deterrence at the strategic level. Our role in North American Aerospace Defence (NORAD) in surveillance, warning, attack assessment and defence against air attack, and our participation in NATO and bilaterally with the United States in surveillance of Soviet submarine forces contribute to the survivability of United States strategic nuclear forces, the keystone of NATO's assured retaliatory capability. We enhance deterrence to the extent that we are able to deny any potential aggressor the use of Canadian airspace, territory or territorial waters for an attack on NATO's strategic nuclear forces.

NORAD's Canadian Region Operations Control Centre at North Bay, Ontario.

We also contribute by making our territory and facilities available to our allies. For example, we have agreements with the United States which, in normal peacetime circumstances, enable unarmed aircraft of the Strategic Air Command, subject to clearance by Canada, to use Canadian military facilities and airspace for operational training. In a crisis, and if in the judgment of the Government the international situation so warranted, they would be permitted to overfly Canada with nuclear weapons and their tanker aircraft would be allowed to operate from Canadian airfields. United States interceptors and Airborne Warning and Control System (AWACS) aircraft would also be able to deploy forward to Canadian airfields to join our air defence forces.

The NATO Airborne Early Warning aircraft is jointly funded and flown by crews from participating countries.

Canadian airspace and military ranges and training areas are also used to test and evaluate the performance of Allied weapons, most notably the United States air-launched cruise missile. Some of these are nuclear capable, but no nuclear weapons are tested in Canada. Warships of our allies regularly visit Canadian ports. Such visits are frequently made on the occasion of exercises during which Allied ships, including Canadian warships, practise combined operations. They are a logical consequence of our membership in an alliance and of our acceptance of the protection offered by collective defence.

The United States and the Soviet Union are both conducting research into the development of strategic defences against ballistic missiles. They are also discussing the issue of strategic defence in their bilateral arms control negotiations in Geneva. Depending on a number of technical, financial and political factors, the United States may eventually begin to deploy ballistic missile defences and the Soviet Union could expand those already in place. The nature of such defences cannot now be precisely determined. The Government will follow closely the progress of such research in order to determine its implications for international security. Future decisions on Canada's role, if any, in ballistic missile defence will depend upon these developments. Such decisions will have to be considered in light of the impact ballistic missile defence could have on strategic stability and on Canadian security.

Stable deterrence at the strategic level is essential to the security of Canada. The Government will continue to contribute to the maintenance of an effective Allied deterrent according to our own independent analysis of the strategic environment.

Conventional Defence

The Soviet conventional threat to Canada and Canadian interests is often overlooked in the face of the nuclear menace. Although this aspect is most evident in Central Europe, where Warsaw Pact forces outnumber those of NATO along the frontier between East and West, it is not entirely absent wherever Canadian interests and Soviet capabilities overlap: at sea, in the Pacific, the Atlantic and the Arctic, and in the air over the approaches to North America.

Both superpowers understand the potentially apocalyptic consequences of a nuclear exchange. If hostilities were to occur, they would thus be more likely to begin at the conventional level, where the Soviet Union has its greatest advantage. Although a conventional conflict would initially put less at risk than would a nuclear war, there would be a serious risk that the hostilities would escalate to include nuclear weapons.

A Canadian M-113 armoured personnel carrier in Germany.

The most effective counter to the conventional threat is to convince any potential aggressor that the chances of an attack quickly achieving its objectives are slight and that, if he were to persist in his aggression, he would run the risk of a nuclear response. This strategy requires adequate and sustainable conventional forces trained, equipped and positioned according to the threat. It may not be necessary to match the other side weapon for weapon, but the more effective the conventional forces, the less is the reliance which has to be placed on nuclear weapons. If early resort to these weapons is to be avoided, the conventional forces in place must be able to fight over an extended period.

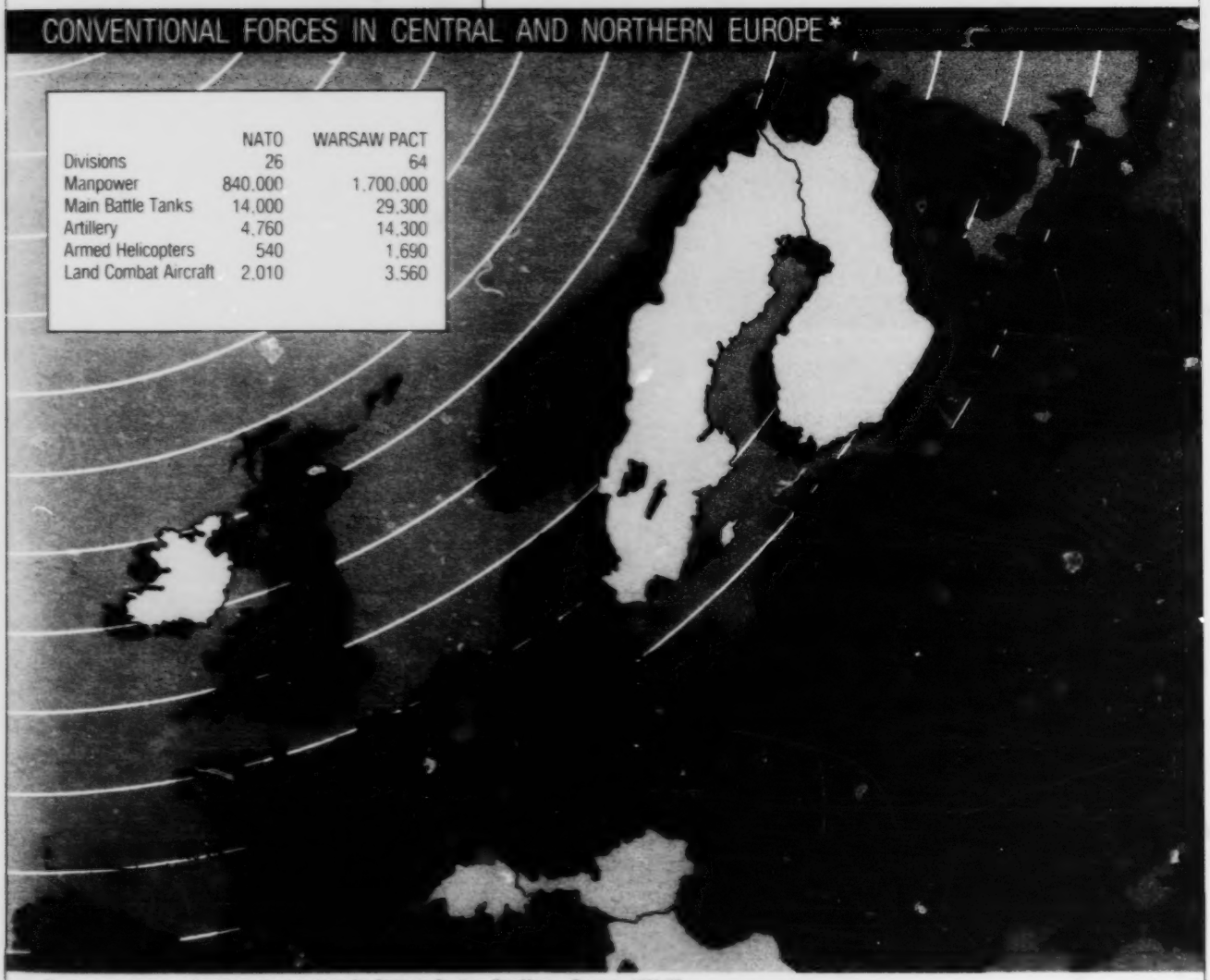
In an era of dramatically increasing cost and sophistication of weapons, credible conventional defence can only be maintained if all members of the Alliance work closely within the framework of collective security. Canada makes its contribution to its own security and to that of the North Atlantic Alliance through maritime forces in the Atlantic and the Pacific, through land and air forces at home and in Europe, and through NATO's common funded programs. Our current force posture is discussed in Chapter V and its future evolution in Chapter VII.

Much of Canada's defence effort is focussed on Europe. That is where the conventional threat is concentrated and, in war, where the decisive conventional battle would be fought.

Deterrence is not divisible. If it fails in Europe, it fails everywhere. By contributing to deterrence in Europe, Canadian forces are serving Canadian interests and contributing to Canada's security.

CONVENTIONAL FORCES IN CENTRAL AND NORTHERN EUROPE*

	NATO	WARSAW PACT
Divisions	26	64
Manpower	840,000	1,700,000
Main Battle Tanks	14,000	29,300
Artillery	4,760	14,300
Armed Helicopters	540	1,690
Land Combat Aircraft	2,010	3,560



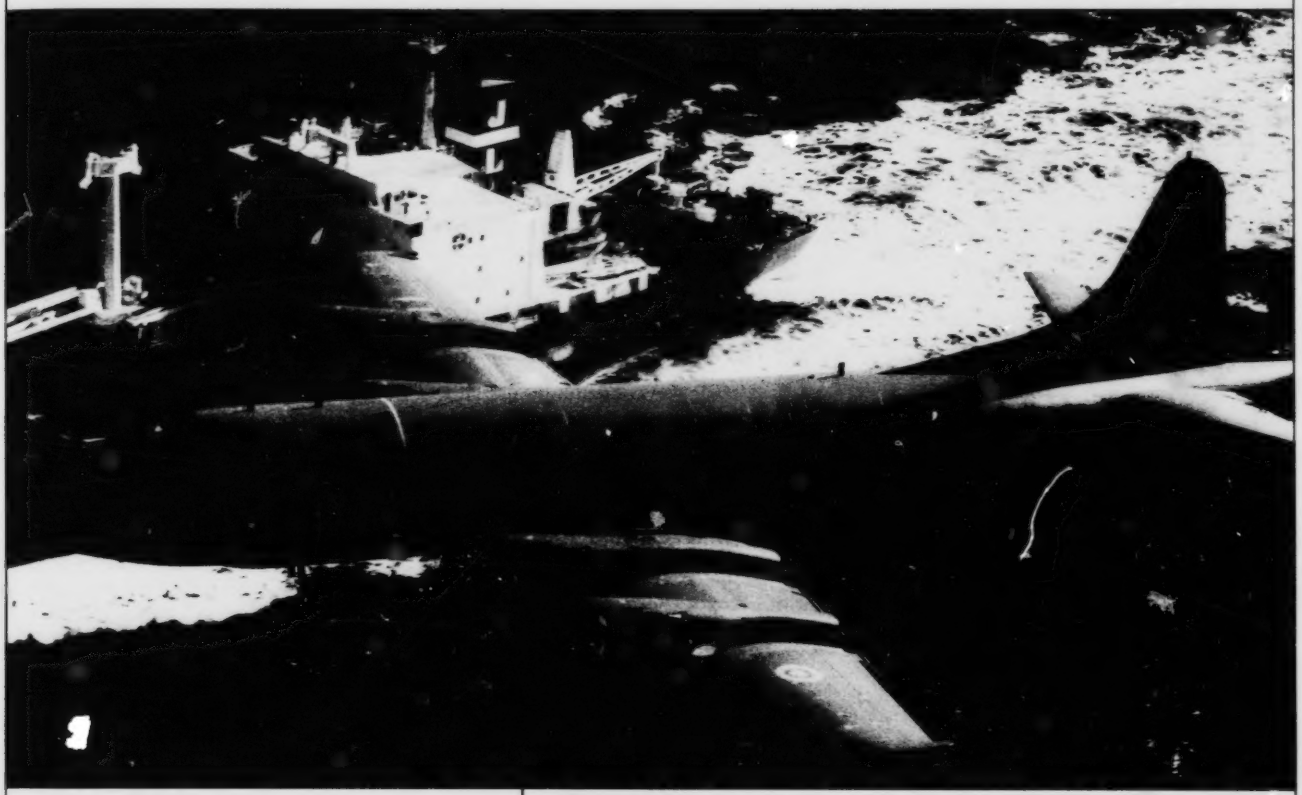
Numbers are based on the International Institute for Strategic Studies, *The Military Balance: 1986-87*

* The Central and Northern Regions of Europe are illustrated in dark blue for NATO (Norway, Denmark, Federal Republic of Germany, Luxembourg, the Netherlands and Belgium), and dark red for the Warsaw Pact (German Democratic Republic, Poland, Czechoslovakia, and the Soviet western military districts).

Canada also contributes to conventional defence by providing materiel and training facilities to NATO allies. For example, we will be providing state-of-the-art sonar equipment to Portugal for its new frigates. There are also extensive arrangements permitting Allied forces to train in Canada or in Canadian waters, taking advantage of our relatively open spaces. The NATO Standing Naval Force Atlantic and other Allied warships regularly visit Canadian waters and exercise with Canadian maritime forces. The United Kingdom carries out army training programs at Suffield and Wainwright, Alberta. The Federal Republic of Germany conducts a similar program at Shilo, Manitoba. The United States, British and German air forces conduct low-level flying training at Goose Bay, Labrador. A similar arrangement has been made with the Netherlands for training to commence there this year. The Government will continue to promote Allied training in Canada subject to compliance with Canadian laws and approved operational, financial, social and environmental guidelines.

The Government recognizes that conventional defence must be strengthened in order to improve deterrence, reduce the likelihood of war, and raise the nuclear threshold. If our conventional forces are to deter, they must be able to defend. If they are to defend, they must be able to fight. To do that, we must maintain their readiness and provide for their sustainment. The Government is also determined to organize and deploy these forces in such a manner as to maximize their efficiency and combat effectiveness.

Canada provides training facilities for NATO allies. These German tank crews are at CFB Shilo, Manitoba.



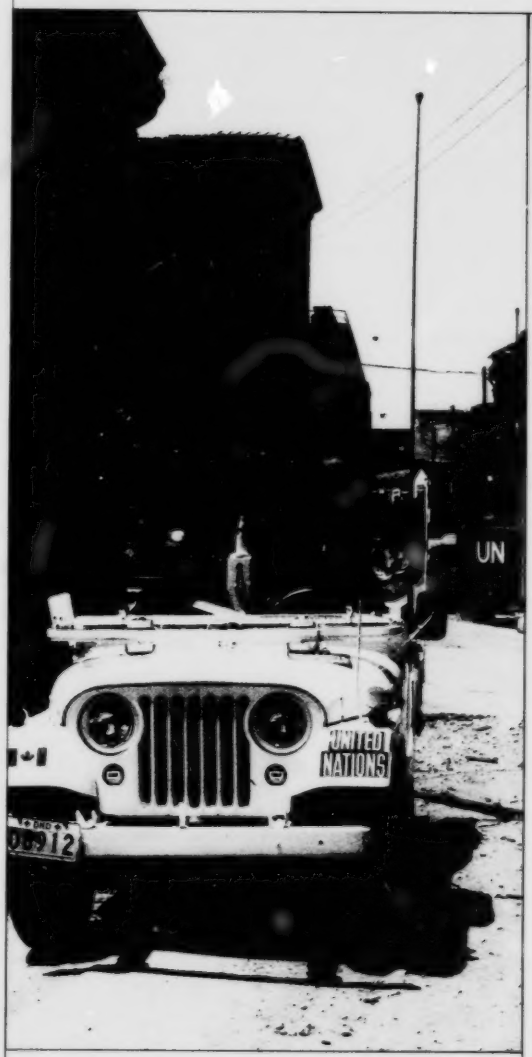
A CP-140 Aurora long-range patrol aircraft.

Sovereignty

After the defence of the country itself, there is no issue more important to any nation than the protection of its sovereignty. The ability to exercise effective national sovereignty is the very essence of nationhood. The Canadian Forces have a particularly important, though not exclusive, role to play in this regard. The protection and control of our territory are fundamental manifestations of sovereignty. Our determination to participate fully in all collective security arrangements affecting our territory or the air or sea approaches to our country and to contribute significantly to those arrangements is an important affirmation of Canadian sovereignty.

Canada is not universally recognized as being sovereign in all of the areas that we claim. At the moment, the United States considers the Northwest Passage to be an "international strait". We regard it as "internal waters" and are engaged in discussions to see whether a solution can be reached based on mutual respect for sovereignty and our common security and other interests.

In peacetime the enforcement of Canadian laws throughout our territory is the responsibility of the civil authorities. This includes Canadian legislation on navigation and pollution in ice-covered waters, game laws in the Arctic, the regulation of fisheries and the control of air traffic in Canadian airspace. In this respect the Polar 8 Icebreaker will make a significant contribution to the maintenance of a Canadian presence and the exercise of sovereignty in Arctic waters. The military



Canadian Forces personnel on United Nations peacekeeping duties in Cyprus.

role in sovereignty is that of the ultimate coercive force available when the capabilities of the civil authorities are inadequate to enforce Canadian laws and regulations or when Canada's right to exercise jurisdiction is challenged by other states.

It follows that an important manifestation of sovereignty is the ability to monitor effectively what is happening within areas of Canadian jurisdiction, be it on land, in the air or at sea, including under the ice. But monitoring alone is not sufficient. To exercise effective control, there must also be a capability to respond with force against incursions. Such a capability represents both an earnest of the government's intent to maintain sovereignty and a deterrent to potential violators.

The Government will not allow Canadian sovereignty to be diminished in any way. Instead, it is committed to ensuring that the Canadian Forces can operate anywhere within Canadian jurisdictional limits. Our Forces will assist civil authorities in upholding the laws and maintaining the sovereignty of Canada.

Peacekeeping

Conflict between NATO and the Warsaw Pact involving Canada and Canadian interests could have its genesis outside the sphere of either alliance in regions where instability and the potential for violence are widespread. As a responsible member of the world community and an active and committed member of the United Nations, Canada has a respected record of peacekeeping service and a proven capacity for difficult assignments in pursuit of the peaceful settlement of disputes. Such disputes will seldom directly involve the security of Canada. In many parts of the world, however, armed conflicts are likely to engage the interests of the Soviet Union and the United States, or their major allies, and thus potentially sow the seeds of a superpower conflict. Canada also plays a vital role in preventing a major rift between our Alliance partners by maintaining peacekeeping forces in Cyprus. In all these instances, the use of our armed forces for peacekeeping or truce supervision, under United Nations or other international auspices, serves our national interest as well as the broader community.

Each request for a Canadian contribution to peacekeeping has to be considered on its own merits. The Government's decision will be based upon the following criteria: whether there is a clear and enforceable mandate; whether the principal antagonists agree to a ceasefire and to Canada's participation in the operation; whether the arrangements are, in fact, likely to serve the cause of peace and lead to a political settlement in the long term; whether the size and international composition of the force are appropriate to the mandate and will not damage Canada's relations with other states; whether Canadian participation will jeopardize other commitments; whether there is a single identifiable authority competent to support the operation and influence the disputants; and whether participation is adequately and equitably funded and logistically supported. Moreover, each of our current commitments is routinely reviewed in light of these criteria.

Canadian military personnel have served with distinction in virtually every United Nations peacekeeping operation since the end of the Second World War. In addition, Canada makes significant financial and material resources available to the United Nations to promote peace and security. Canadian peacekeeping commitments flow from an established policy whereby up to 2,000 Canadian Forces members can be called on for peacekeeping duties at any one time. Current deployments overseas as well as standby elements in Canada are counted within this allocation.

Our widely recognized support for the United Nations and its pursuit of global security represents an important contribution to world stability and thus to Canadian security.

CANADA'S CONTRIBUTION TO PEACEKEEPING

Past

UNEF I 1956–1967 United Nations Emergency Force (Egypt)

UNOGIL 1958 United Nations Observation Group in Lebanon

ONUC 1960–1964 Organisation des Nations Unies au Congo

UNTEA 1962–1963 United Nations Temporary Executive Authority (New Guinea)

UNYOM 1963–1964 United Nations Yemen Observation Mission

DOMREP 1965–1966 Mission of the Representative of the Secretary General in the Dominican Republic

UNIPOM 1965–1966 United Nations India-Pakistan Observation Mission

UNEF II 1973–1979 United Nations Emergency Force (Egypt)

UNIFIL 1978 United Nations Interim Force in Lebanon

NON-UN

ICSC 1954–1974 International Commission for Supervision and Control (Cambodia, Laos and Vietnam)

ICCS 1973 International Commission for Control and Supervision (Vietnam)

OTN 1968–1970 Observer Team to Nigeria

Present

* **UNMOGIP 1949 United Nations Military Observer Group in India and Pakistan** **

UNTSO 1954 United Nations Truce Supervision Organization (Egypt, Israel, Jordan, Lebanon and Syria) — 22 officers

* **UNCMAC 1954 United Nations Command, Military Armistice Commission (Korea) — 1 officer**

UNFICYP 1964 United Nations Peacekeeping Force in Cyprus — 515 all ranks

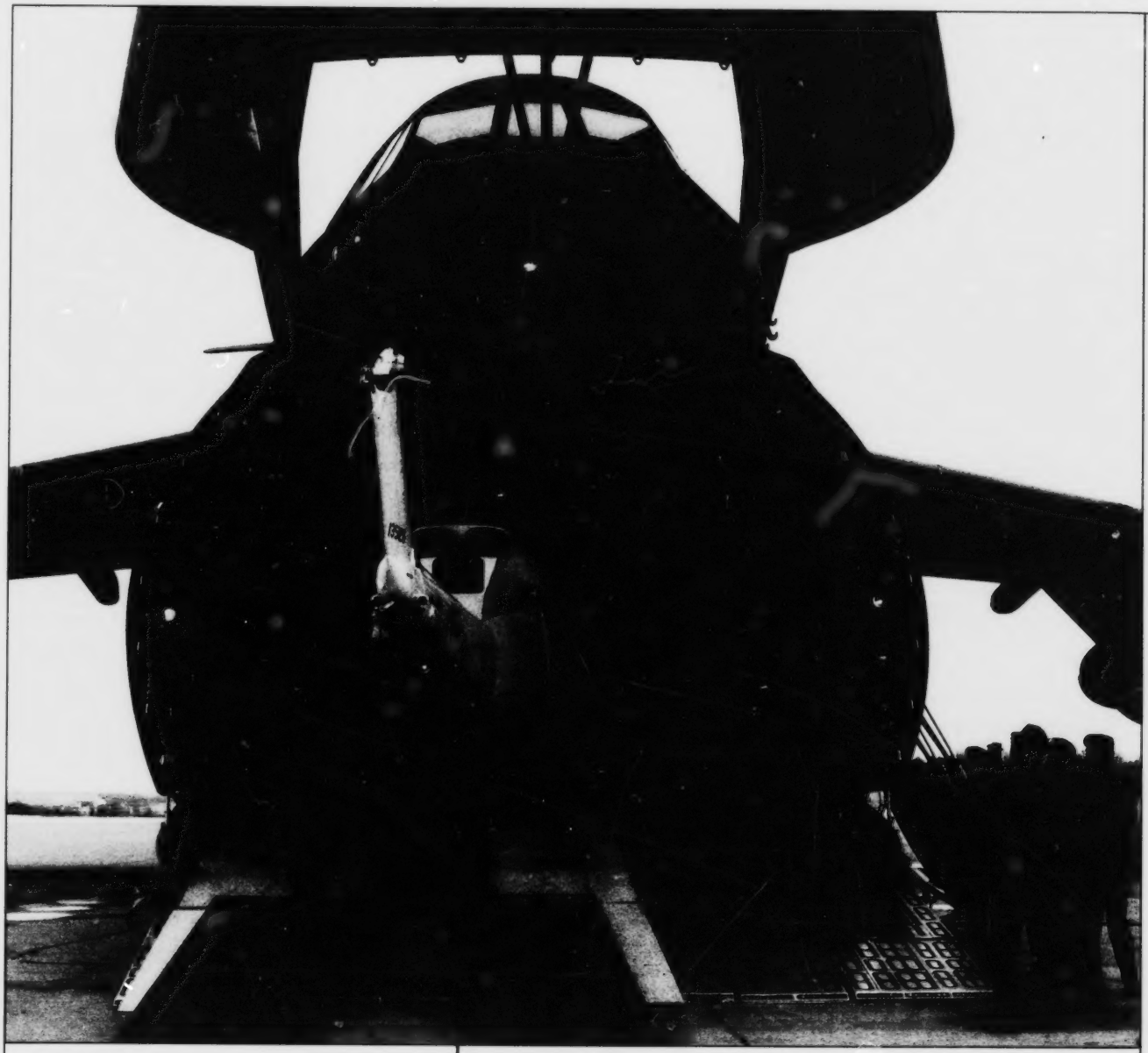
UNDOF 1974 United Nations Disengagement Observer Force (Syria-Israel) — 235 all ranks

NON-UN

MFO 1986 Multinational Force and Observers (Egypt) — 137 all ranks

* not shown

** current participation is limited to provision of a Hercules aircraft twice yearly for move of UNMOGIP HQ



A Canadian helicopter is loaded on a USAF transport for peacekeeping duties with the Multinational Force and Observers in the Sinai.

Arms Control

Arms control, like defence, is one of the pillars of Canadian security policy. They are complementary, and the policies pursued in each area are consistent with the common goal of enhancing security and stability at the lowest level of forces.

Short of the utopian state of an unarmed world, arms control will never be a substitute for adequate defence. Conversely, if we are to succeed in enhancing security, we cannot rely on military force alone.

Canada has articulated the following six specific arms control goals:

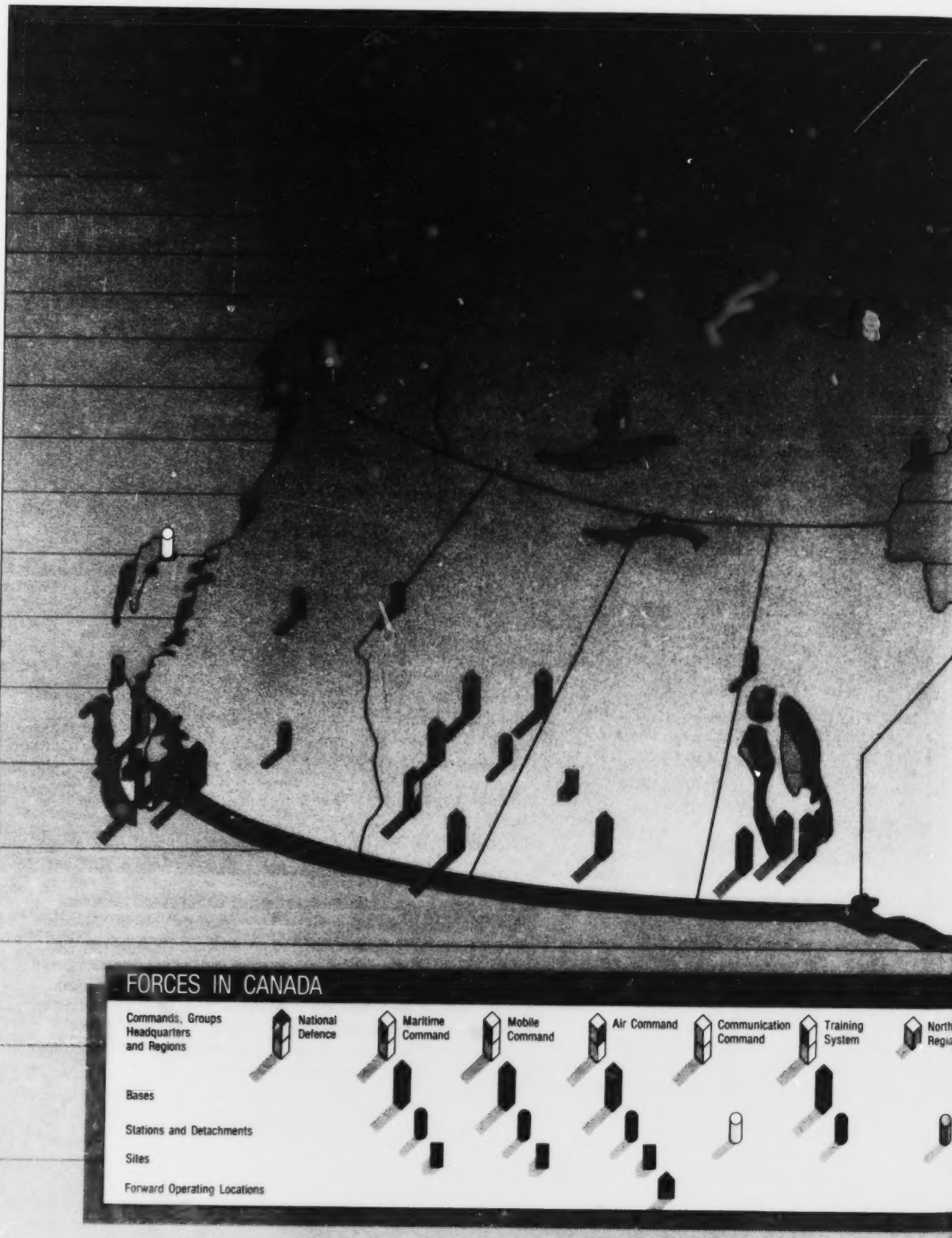
- negotiated radical reductions in nuclear forces and the enhancement of strategic stability;
- maintenance and strengthening of the nuclear non-proliferation regime;
- negotiation of a global chemical weapons ban;
- support for a comprehensive test ban treaty;
- prevention of an arms race in outer space; and
- the building of confidence sufficient to facilitate the reduction of military forces in Europe and elsewhere.

Unilateral disarmament measures will not enhance Canadian security. Experience has shown that effective arms control can only be achieved through the careful negotiation of balanced and verifiable reductions or limitations. Unless such agreements are complied with fully and in good faith, they will produce neither increased stability nor the confidence necessary for improved East-West relations. That is why verification of arms control agreements is so important. Arms control negotiations require a unique blend of international diplomacy and military-technical expertise. The Department of National Defence works closely with the Department of External Affairs in the formulation of arms control proposals, in the continuing dialogue with our Alliance partners and in those negotiations to which we are party.

Internationally, the Department of National Defence provides this expertise in a broad range of fora. Members of the Department participate in the Canadian delegations to the United Nations, the Conference on Security and Co-operation in Europe, and the Mutual and Balanced Force Reduction talks. They also played a role in the Stockholm Conference and will do so again in any follow-on negotiation of confidence and security building measures.

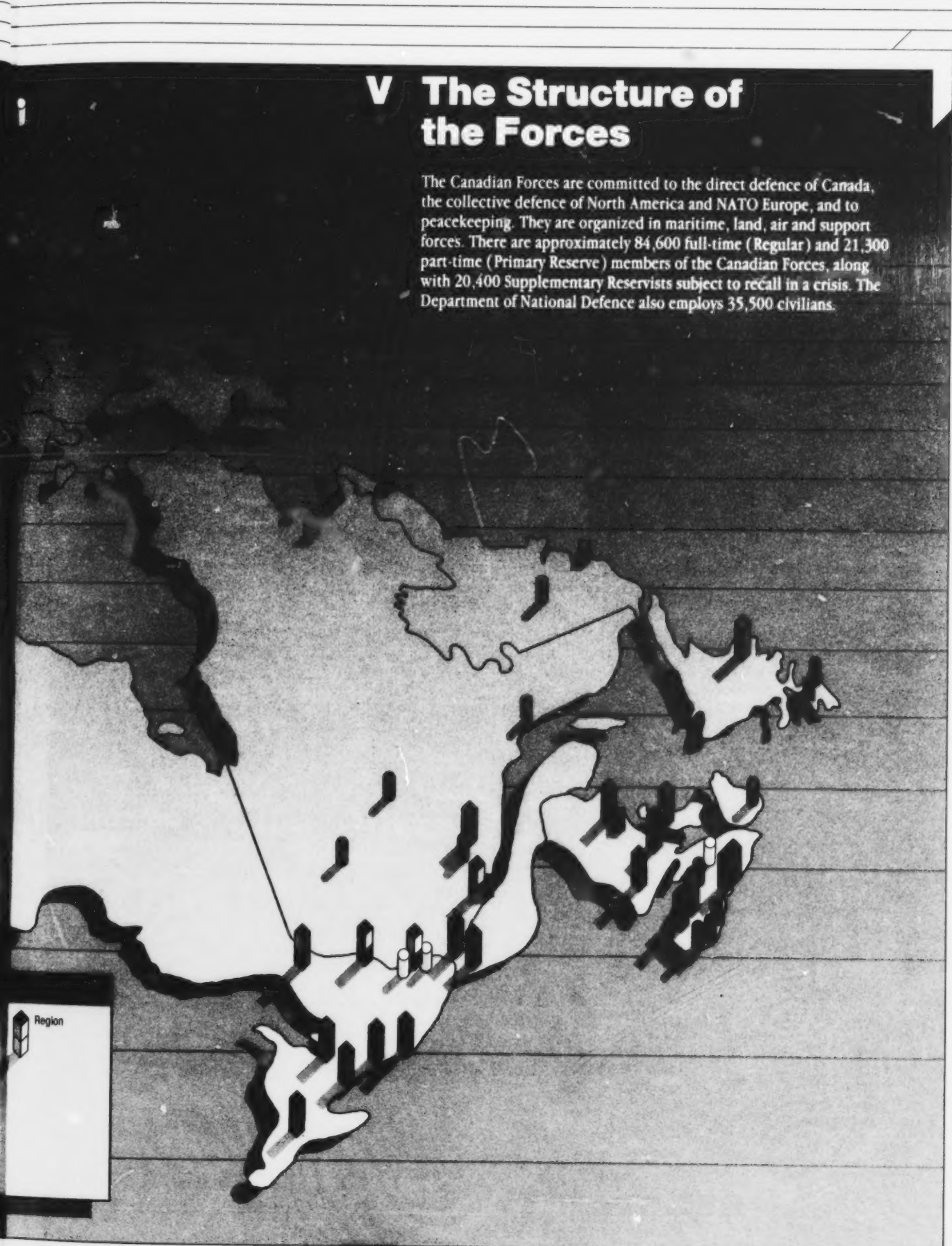
The arms control negotiations of most concern to the Department of National Defence are those with the greatest potential to affect East-West relations, the East-West military balance, or the disposition of Canadian Forces.

In the Geneva negotiations between the United States and the Soviet Union on strategic nuclear weapons, we support the current emphasis on deep reductions, concentrating on the most destabilizing systems. We believe that the limitation of long-range, air and sea-launched cruise missiles must also be addressed. In the negotiations on conventional forces in Europe, we believe the focus should be on effective confidence and security building measures and on the establishment of a more stable balance of forces so as to reduce the likelihood of war occurring as a result of miscalculation or surprise attack.


FORCES IN CANADA
Commands, Groups Headquarters and Regions
National Defence
Maritime Command
Mobile Command
Air Command
Communication Command
Training System
Bases
Stations and Detachments
Sites
Forward Operating Locations

V The Structure of the Forces

The Canadian Forces are committed to the direct defence of Canada, the collective defence of North America and NATO Europe, and to peacekeeping. They are organized in maritime, land, air and support forces. There are approximately 84,600 full-time (Regular) and 21,300 part-time (Primary Reserve) members of the Canadian Forces, along with 20,400 Supplementary Reservists subject to recall in a crisis. The Department of National Defence also employs 35,500 civilians.



Dedicated and well-trained sailors are the Canadian navy's greatest asset

Maritime Forces

The major formations of the maritime forces are naval squadrons under Maritime Command and an air group under its operational control. Maritime Command Headquarters is in Halifax, Nova Scotia.

The maritime forces on the East Coast consist of two destroyer squadrons (each with six destroyers), a submarine squadron and seven maritime air squadrons. The destroyers, with embarked helicopters, and support ships operate in anti-submarine task groups. These groups conduct surveillance operations, protect vital shipping and support other NATO maritime commitments.

The maritime forces on the West Coast consist of two destroyer squadrons (each with four destroyers) and two maritime air squadrons. They conduct surveillance operations and support joint Canada-United States security operations.

MARITIME FORCES

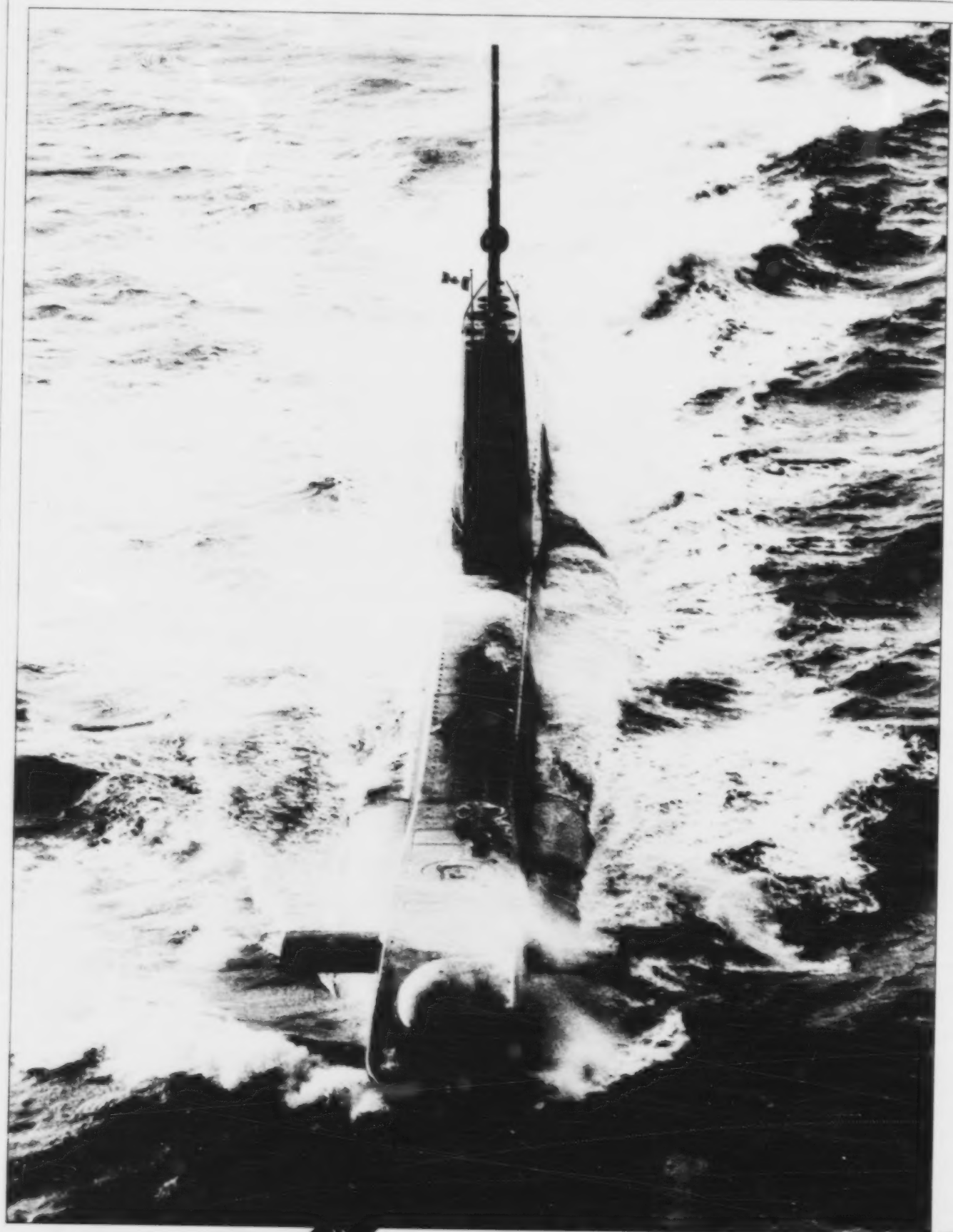
Personnel	
Regular	10,000
Primary Reserve	3,300
Major Combatant Units	
Destroyer Squadrons	4
Submarine Squadrons	1
Reserve Divisions	12
Major Combatant Units	East Coast / West Coast
Destroyers	12 / 4
Submarines	4 / —
Patrol Frigates	6 / —
Coastal Defence Vessels	— / 4
Support Ships	4 / 2
Operational Aircraft	
Maritime Patrol Aircraft	18
Helicopters	28

An auxiliary fleet of ocean and harbour tugs, research vessels, a coastal oiler, target-towing vessels and other craft supports both operational fleets.

Shore infrastructure for the fleet consists of dockyards, bases, training facilities, supply depots, ammunition magazines and radio stations on both coasts.

The Naval Reserve comprises 19 divisions in cities and towns across Canada with two more planned for this year. Its primary roles are coastal defence and control of shipping in time of crisis.

Fleet exercises ensure combat readiness



Members of the Canadian Airborne Regiment prepare for a jump.

Land Forces

The major formations of the land forces are three brigade groups and a special service force, all supported by helicopter squadrons. Land forces are deployed in Canada and Europe under the command of Mobile Command and Canadian Forces Europe, respectively. Mobile Command Headquarters is in St. Hubert, Quebec.

LAND FORCES

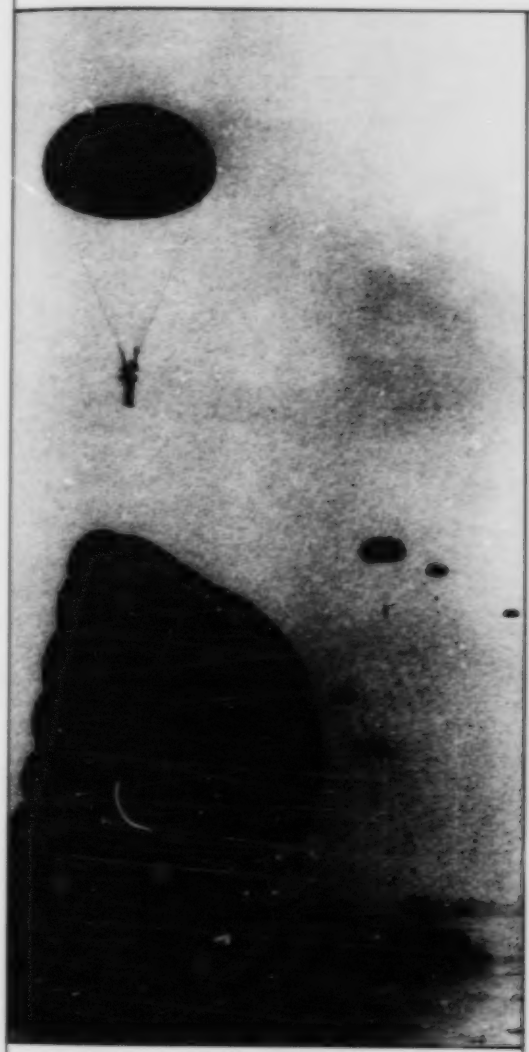
Personnel		
Regular	22,500	
Primary Reserve	15,500	
Major Operational Units		
Brigade Groups	3	
Special Service Force	1	
Task Force Headquarters	1	
Helicopter Squadrons*	11	(4 Reserve)
Major Reserve Units	106	
Minor Reserve Units	25	
Principal Equipment	**In Canada**	**In Europe**
Main Battle Tanks	37	77
Armoured Vehicles General Purpose	195	—
Armoured Personnel Carriers	891	349
Reconnaissance Vehicles	112	60
155 mm Artillery	50	26
105 mm Artillery	223	10
Anti-Tank Weapons	105	44
Tactical Helicopters (Kiowa, Twin Huey)*	88	13
Transport Helicopters (Chinook)*	7	—
Bases in Canada	8	

* operational control only (for Command purposes)

One of Canada's three OBERON class submarines.

Land Forces in Canada. Mobile Command's Regular combat elements are concentrated in two brigade groups and a special service force. Brigade groups consist of battalion-sized units of armour, artillery and infantry, and engineer, signals and combat service support units. The Special Service Force is a light, air-transportable force with an airborne capability. A signals regiment, together with staff from Mobile Command HQ, is capable of establishing a task force headquarters.

The driver of a Lynx reconnaissance vehicle during RENDEZVOUS 85, an exercise in Alberta that involved more than 14,000 Canadian troops.



A jump by soldiers of the Special Service Force.

One of the brigade groups, 5e Groupe-brigade du Canada (5GBC) at Valcartier, is currently designated to fulfil Canada's commitment to send an air-sea transportable (CAST) force to northern Norway in times of high East-West tension, prior to an expected attack against NATO. The other brigade group, 1 Canadian Brigade Group (1CBG) from Calgary, is the principal source of trained manpower to bring the army elements permanently stationed in Europe up to the wartime level of forces committed by Canada to help defend against military attack in the NATO Central Region.

One infantry battalion group from the third formation, the Special Service Force, is assigned to the Allied Command Europe Mobile Force (Land), (AMF(L)), for deployment to the NATO Northern Region in times of high East-West tension, either in northern Norway or in Denmark. The Airborne Regiment of the Special Service Force is assigned to defence operations in Canada.

Canadian peacekeeping commitments are met by rotating units from each of the Canada-based elements for periods of peacekeeping duty.

The land combat elements are backed by training and support facilities: eight bases, a combat training centre, an airborne centre, an air defence school, and four regimental battle schools. Mobile Command's Regular Force strength is approximately 18,400. Land forces in Canada are supported by the helicopter squadrons of 10 Tactical Air Group.

Mobile Command's Primary Reserve is the Militia, organized into five areas, comprising 131 units and subunits. Its role is to contribute to defence of Canada missions and train replacement manpower for the Regular Force brigade groups.

Land Forces in Europe. 4 Canadian Mechanized Brigade Group (4CMBG) is stationed in the Federal Republic of Germany at Lahr and Baden-Soellingen, and forms part of Canadian Forces Europe. Its operational units consist of an armoured regiment, an artillery regiment, two mechanized infantry battalions, an engineer regiment, a signals squadron, a service battalion and a helicopter squadron. In crisis or war it would be assigned to the Central Army Group Commander's tactical reserve, performing operations in support of either II (German) Corps or VII (United States) Corps. Its current strength is approximately 4,100. In crisis, it would be augmented by 1,400 soldiers flown over from Canada.

The CF-18 is equipped for both ground attack and air superiority missions.

Air Forces

The major formations of the air forces are air groups: six based in Canada under Air Command, and one based in Europe under Canadian Forces Europe. They are supported by Reserves and bases, stations, schools and other facilities.

AIR FORCES

Personnel		
Regular	23,050	
Primary Reserve	950	
Major Operational Units		
Tactical Fighter Squadrons	8	
Maritime Squadrons*	9	(1 Reserve)
Tactical Helicopter Squadrons**	8	(4 Reserve)
Medium Transport Helicopter Squadrons**	2	
Transport and Rescue Squadrons	6	(2 Reserve)
Transport Squadrons	4	
Radar Squadrons	19	

Principal Equipment	In Canada	In Europe
Tactical Fighters (CF-18)***	60	44
Tactical Fighters (CF-5)	58	—
Maritime Aircraft*	71	—
Tactical Helicopters**	88	13
Transport Helicopters**	7	—
Tactical Transport Aircraft	46	2
Strategic Transport Aircraft	5	—
SAR Aircraft	49	—
Training Aircraft	226	5
Bases in Canada	17	

* Squadrons under operational control of Maritime Command.

** One squadron under command of 4 CMBG, other squadrons under operational control of Mobile Command.

*** The planned procurement level for the CF-18 is 138 by September 1988.

Air Forces in Canada. Air Command provides combat-ready air forces for surveillance and control over Canadian airspace and for defence of North America. It also provides air operational and air transport support to maritime and land forces.

Air Command's Regular Force elements are organized into fighter, maritime, tactical, transport, reserve and training groups. Air Command Headquarters in Winnipeg, Manitoba provides the command and control of all air forces in Canada, with the exception of Maritime Air Group and 10 Tactical Air Group which, along with associated Air Reserve units, are under the operational control of Maritime and Mobile Commands, respectively. Two of the fighter squadrons in Canada are currently committed as rapid reinforcement forces for northern Norway in time of crisis. Functions common to all the air groups, such as maintenance, training, flight safety and standards, are centrally controlled.

The CH-147 Chinook helicopter plays a vital logistics role.

Four CF-18s over Germany.

The Air Reserves comprise one group headquarters, two wings, seven squadrons and nine augmentation flights.

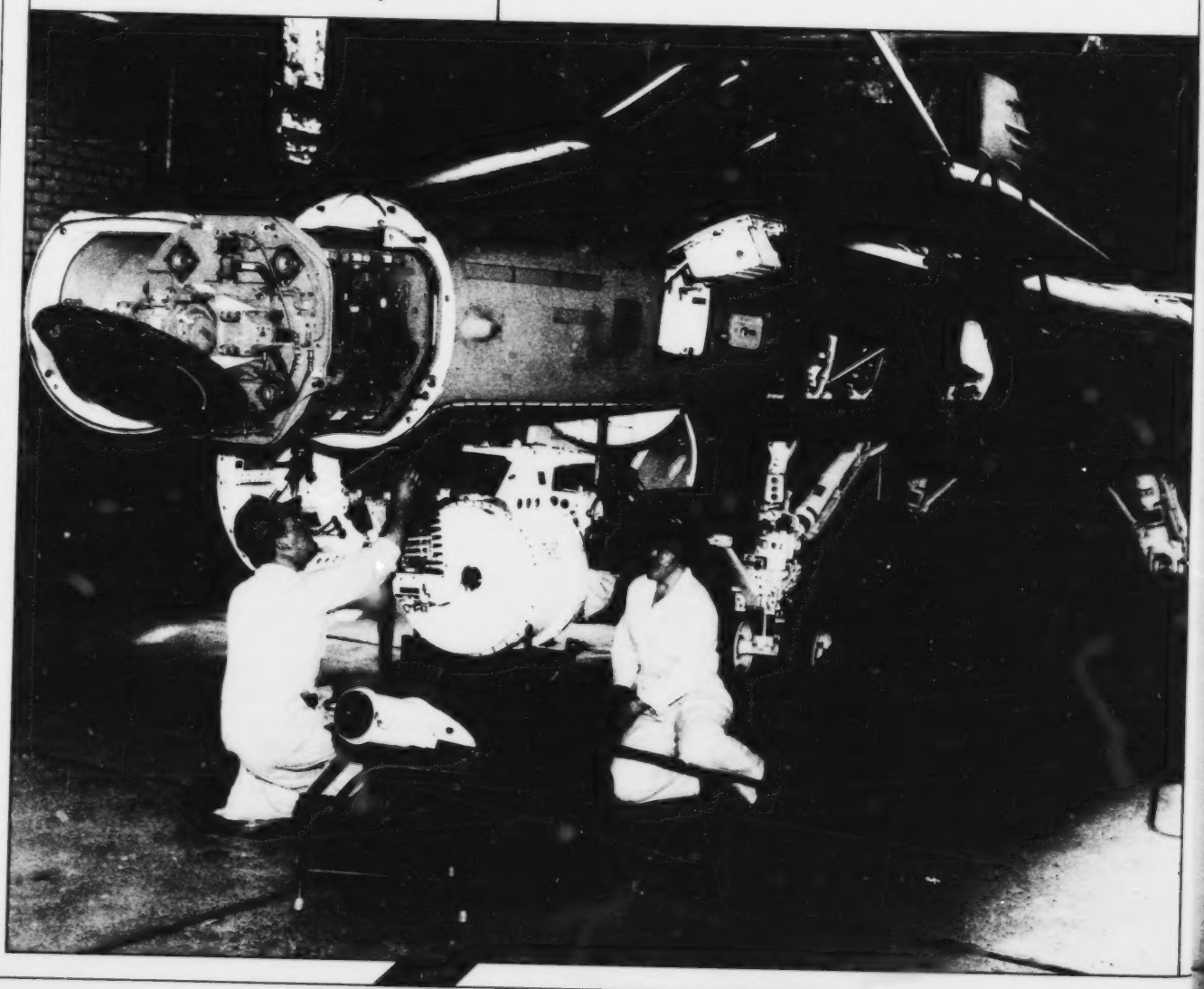
Air Forces in Europe. The air formation in Europe, 1 Canadian Air Group (1CAG), is a component of Canadian Forces Europe. It comprises a headquarters, three tactical fighter squadrons and an air maintenance squadron on the two bases at Lahr and Baden-Soellingen. In crisis or war, the Air Group would perform conventional air-to-ground and air defence roles as part of the 4th Allied Tactical Air Force.

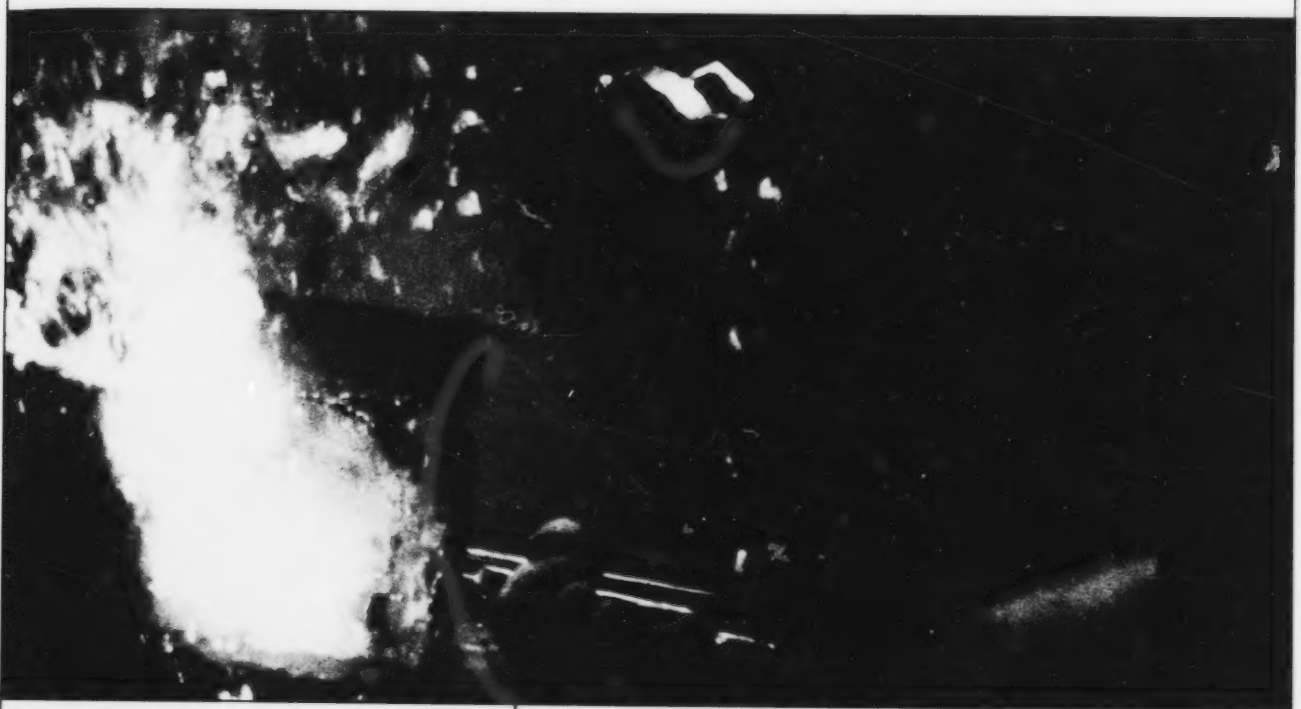
Support Forces

The operational elements of the Canadian Forces depend upon support personnel who serve at military bases and facilities in Canada and overseas. Support functions comprise strategic communications, training, logistics, medical activities and personnel administration. The majority of these forces are concentrated in or directed by National Defence Headquarters, the Canadian Forces Communication Command and the Canadian Forces Training System.

Communications. Canadian Forces Communication Command provides strategic communications services to the Canadian Forces. It operates and maintains several data networks and voice communications systems. Its military personnel include a Regular Force contingent of about 3,300 members and a Communication Reserve of 1,570.

The CF-18 allows quick access to aircraft components for improved maintenance and troubleshooting.





A diver training underwater.

Training. The Canadian Forces Training System provides training services to the operational commands. It operates 18 schools on five training bases and three schools on other commands' bases. Its strength is 4,500 regular military personnel. Almost 2,400 members are employed as instructors. Another 500 military instructors from other commands serve as incremental staff. The training system comes under the jurisdiction of the Assistant Deputy Minister (Personnel) whose mandate also includes responsibility for the National Defence College, the Military Colleges and the Staff Colleges. The Canadian Forces also provide training for military personnel from developing countries and send training advisers abroad. At any one time, 40 to 50 students from Africa, the Middle East and the Caribbean are training in Canada.

Logistics Support. Logistics support encompasses a wide and complex spectrum of activities related to materiel acquisition, maintenance, storage, distribution and construction. Within the Canadian Forces each individual command has logistical responsibility for materiel under its operational control. At the national level this responsibility rests with the Assistant Deputy Minister (Materiel) at National Defence Headquarters. His organization is responsible for acquiring and introducing equipment into service and supporting that equipment during its service life. Given the variety and complexity of equipment used by the Canadian Forces, the logistics support group is necessarily large and technically specialized. It operates national-level support units such as supply and ammunition depots, maintenance depots and workshops, test and evaluation establishments, quality assurance establishments, research establishments, and movement and postal units.

VI The Commitment – Capability Gap

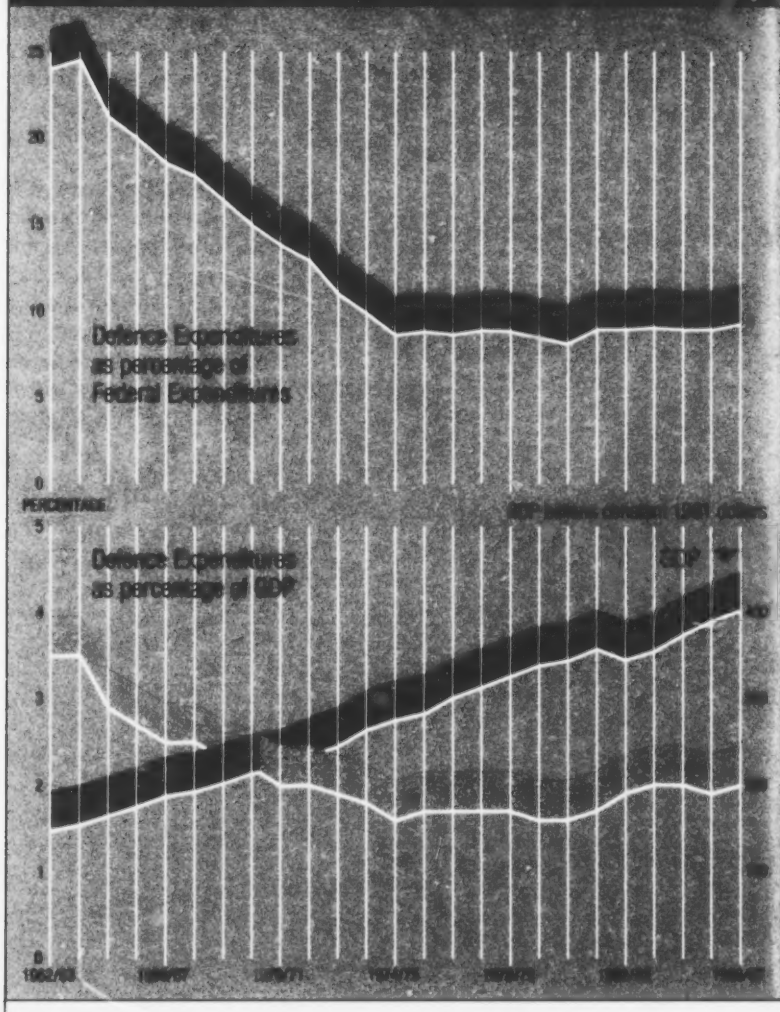
Since coming to office, the Government has reviewed Canada's military commitments in relation to the current capabilities of the Canadian Forces and those they can be expected to possess in the future. This review has confirmed that we are not able to meet those commitments fully and effectively. After decades of neglect, there is indeed a significant "commitment-capability gap".

Even if the Canadian Forces were fully manned and had modern, state-of-the-art equipment, to fulfil existing defence commitments would be a daunting challenge. The truth, however, is that much of the equipment of most elements of the Canadian Forces is in an advanced state of obsolescence or is already obsolete. Modernization programs have not kept pace with obsolescence. The maritime forces have too few operational vessels, very limited capacity to operate in the Arctic and no capability to keep Canadian waterways and harbours clear of mines. The land forces have severe equipment shortages and too few combat-ready soldiers, and the Militia is too small, ill-equipped and insufficiently trained to make up the difference. The air forces suffer from a serious shortage of air transport to move troops and equipment to Europe in times of tension and to sustain them during hostilities. They have too few maritime patrol aircraft. They lack sufficient numbers of modern weapons for the CF-18 and have no replacement for CF-18 aircraft lost in peacetime. Nowhere, however, is the gap more evident than in the lack of logistic and medical support for our forces committed to Europe.

The root of the problem is the level of funding available to defence over the last 25 years. There has been a long-term trend towards spending smaller percentages of the federal budget and of Canada's Gross Domestic Product on defence. In some of those 25 years, defence spending actually fell. In many others, it did not keep pace with inflation. Inevitably, the portion of the defence budget that suffered most from this neglect was that used to buy new equipment. In 1962-63, more than 20 per cent of the budget was spent on capital projects. This level generally declined throughout the 1960s until it reached a low point of about 9 per cent in 1972-73. It began to increase thereafter, but it was not until 1982-83 that it went above 20 per cent again. In 1985, NATO countries spent, on average, about 25 per cent of their defence budgets on equipment acquisition.

The Past: These Second World War vintage Boffin guns protect Canadian airfields in Europe.

CANADA'S DEFENCE EFFORT

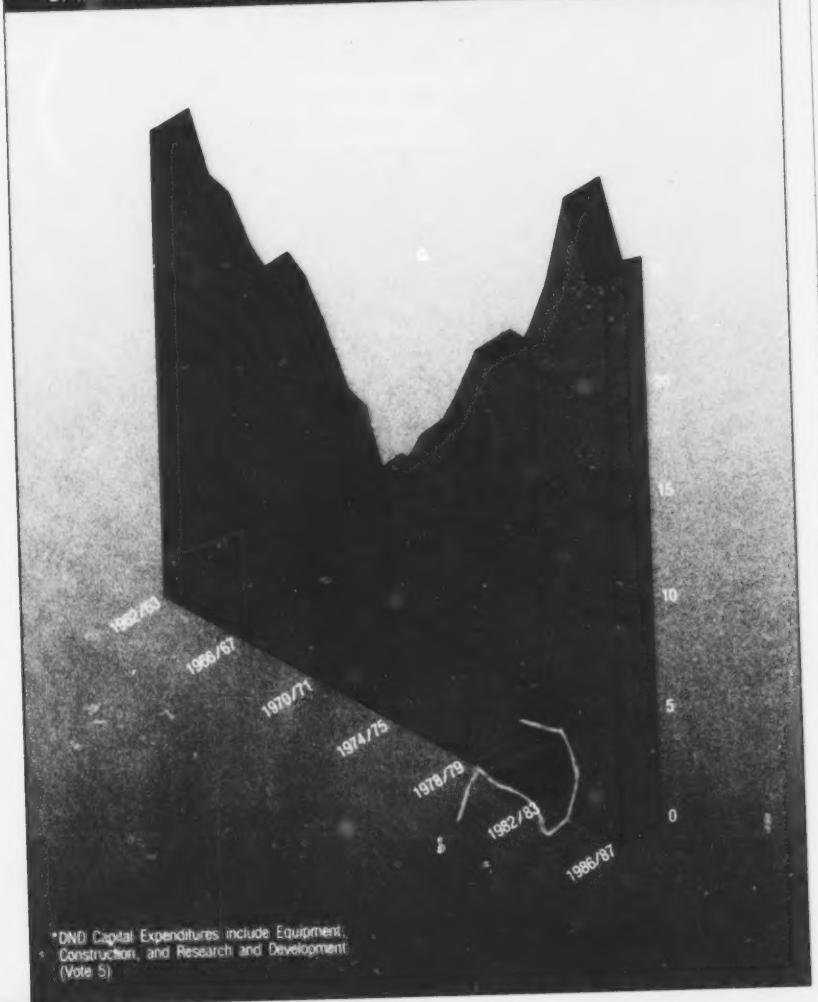


Underfunding inevitably took its toll on the equipment used by the Canadian Forces. Purchases were deferred or spread over a longer period of time. It became normal to replace equipment on a less than one-for-one basis and to reduce modernization programs, even though there might be no military logic for doing so. As a result, the navy today relies exclusively on vessels in commission or under construction in 1971. The newest ship is already 14 years old. The oldest, at 31 years, is older than most of those who sail in her. In 1963 there were 45 major warships and 10 minesweepers in commission. Today, there are only 26 warships and no minesweepers. Since 1971 the air force has acquired only two new militarily significant aircraft systems, the CF-18 fighter and the CP-140 Aurora long-range patrol aircraft. In both cases, fewer aircraft were acquired than those they replaced. The air force now has

about 75 per cent of the aircraft, fixed-wing and helicopter, that it had in 1971. The army was able to replace a number of items of equipment. Once again, most, including its major acquisition, the Leopard tank, were in considerably smaller numbers than those they replaced.

In recent years more money has been spent to purchase equipment. The results will eventually be seen in the form of new frigates, low-level air defence batteries and many other essential but less significant improvements. Nevertheless, even this funding is insufficient to overcome the "bow wave" of deferred equipment acquisition built up since the 1960s. If this condition were allowed to continue unaltered, it would soon lead to "rust-out", the unplanned and pervasive deterioration in the military capabilities of the Canadian Forces.

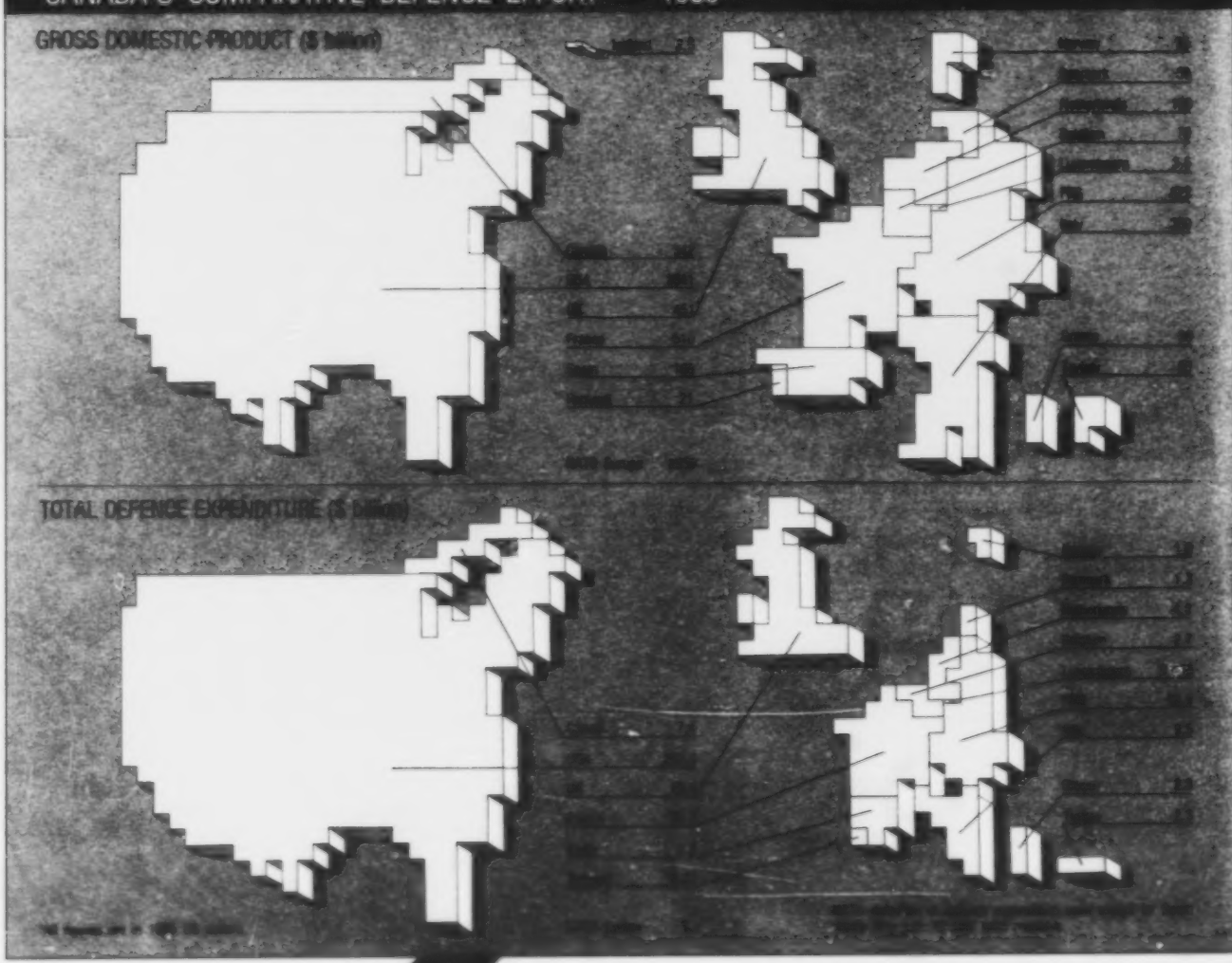
CAPITAL PROGRAM

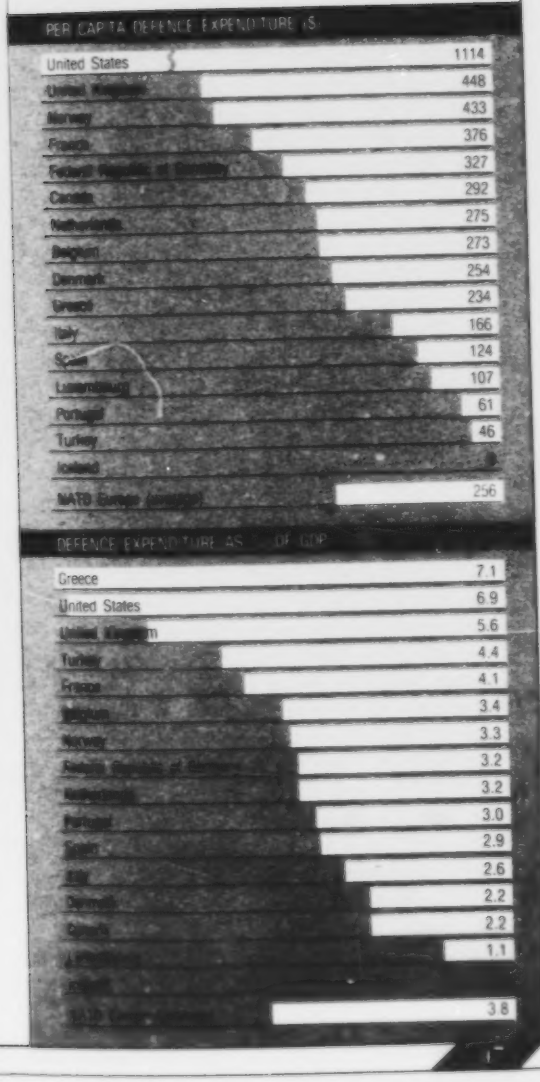


*DND Capital Expenditures include Equipment, Construction, and Research and Development (Vote 5)

Eventually our commitments could not be safely maintained and, finally, even any illusion that we were contributing to collective security would disappear. Our forces stationed in Germany would cease to be effective in combat and would have to be withdrawn by the mid-1990s. Despite the ongoing delivery of the CF-18, without the purchase of additional aircraft to replace those lost through peacetime attrition, there would be insufficient fighters in Europe or Canada to maintain our commitments beyond the late 1990s. Although the Canadian Patrol Frigate Program is underway and the Tribal class is being updated, the rest of our maritime forces will soon be beyond the point where they are effective and will have to be withdrawn in the mid-1990s.

CANADA'S COMPARATIVE DEFENCE EFFORT* — 1985





If "rust-out" were permitted to occur, either by intent or neglect, the loss of equipment in the 1990s would by itself dictate a new, greatly diminished, defence role. In order to avoid having a policy determined by the process of obsolescence, there were really only three approaches the Government could take over a reasonable period of time:

- increase significantly the resources devoted to defence so that, over a period of 10 to 15 years, the Canadian Forces would become capable of meeting current commitments;
- reduce commitments to the point where those remaining could be carried out by existing forces, within existing resources; or
- seek some combination of these two alternatives.

Each of these approaches posed difficult choices. The first was the only one by which Canada's present commitments could credibly be met. This approach would not preclude reorienting Canada's present alliance commitments over a period of years. Indeed, changes in commitments are more easily negotiated when they are part of a strong and growing defence performance. Our effort would, of course, have to increase substantially. Defence expenditures would have to rise in real terms at a rate so dramatic as to be beyond Canada's ability to pay.

The second approach would require massive cuts in our military commitments. A reduction sufficient to eliminate the gap would have major repercussions on our relations with the United States and our Western European allies. It would represent a retreat from our undertakings within NATO, would be read by our allies as shirking our common defence responsibilities and would threaten the cohesion of the Alliance.

Shrinking our undertakings to existing levels of resources would markedly affect the nature of our commitments abroad. It would also have far-reaching implications for the forces in Canada and would harm the local economies where military bases are now located.

As a result of its defence review, the Government has decided to alter some commitments to bring them more into line with resources, while improving the effectiveness with which the remaining commitments are carried out. At the same time, spending will be increased in a determined fashion to make the defence effort more responsive to the challenges of the 1990s and beyond. The results of decades of neglect can be overcome, but it will require a long-term solution: a steady, predictable and honest funding program based on coherent and consistent political leadership.

VII The Way Ahead

Canadian defence policy will continue to be based on a strategy of collective security within the framework of the North Atlantic Alliance, including the continental defence partnership with the United States. Within this broad framework, defence policy will contribute to:

- maintenance of strategic deterrence,
- credible conventional defence,
- protection of Canadian sovereignty,
- peaceful settlement of international disputes, and
- effective arms control.

Canada will continue to participate in collective deterrence and defence in North America, in Western Europe and at sea.

In charting the way ahead, the Government will take a number of strategically coherent and militarily sound initiatives. These changes will be apparent in both national and alliance contexts and will, collectively, represent a significant and visible increase in the overall effectiveness of the Canadian Forces. We will provide the navy with modern, capable vessels for operations in the three oceans contiguous to our territory: the Atlantic, the Pacific and the Arctic. Our ability to survey and defend Canadian territory will be bolstered. Our land and air commitments in Europe will be consolidated on the central front in order to provide a credible and more sustainable Canadian contribution. The Reserves will be revitalized and enlarged to assume a greater role in the defence of Canada. These initiatives, when combined with what is already being done, will produce over time the best force structure within available resources and a level of military capability sufficient to meet our commitments effectively. With these changes, Canada will be a more responsible partner. And, we will be more honest with our allies, with our citizens, and with the men and women of the Canadian Forces who risk their lives in our defence.

Three Oceans

Canada is a maritime nation with a proud sea-going tradition. The three oceans off our shores are sources of natural wealth, which we are only beginning to tap, and avenues for the growing international trade upon which we are dependent for our well-being.

Strategically, the sea is neutral. Sufficient naval forces, properly deployed, can keep an opponent at arm's length, thus providing strategic depth. Alternatively, an opponent can use the sea to get in close and attack targets of his own choosing. Canadian naval forces must be able to respond to challenges within our own waters, if necessary denying their use to an enemy. We must also contribute to the collective maritime strength of the Alliance.

The Future: The new Low-Level Air Defence System, consisting of modern missiles and guns, will replace the obsolete Boffins at Canadian airfields in Europe.

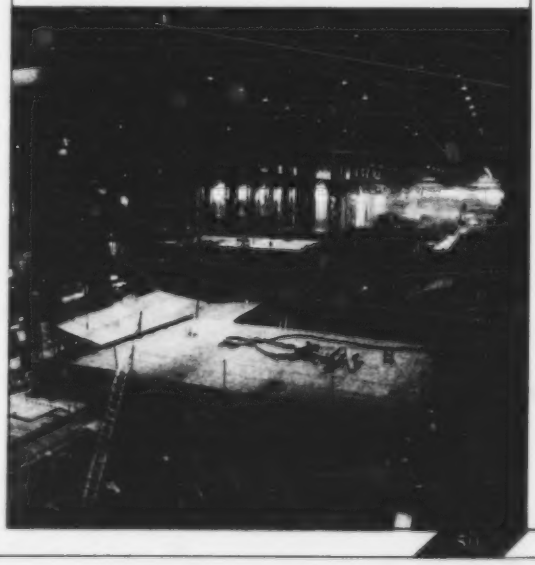
The Atlantic is the ocean of primary strategic importance to Canada and its NATO allies. It is essential to deterrence, particularly deterrence of conventional aggression in Europe, that the vital sea lines be maintained in order to resupply and reinforce Western Europe. With sufficient naval forces, the Atlantic is a bridge linking the two halves of the Alliance. In their absence, it is a barrier. Our opponents have a natural advantage: it is easier to threaten shipping than to ensure its safety. Canadian maritime forces — aircraft, surface ships and submarines — by contributing to the security of the Atlantic sea lines of communication, and thus to the support of our land forces, enhance deterrence.

The strategic significance of the northeast Pacific has become increasingly apparent in light of the growing reach of the Soviet Navy. The shortest sea lines linking North America with the key trading nations of the western Pacific pass through this area, as do the shipping lanes between Alaska and the United States West Coast. The Strait of Juan de Fuca is a major shipping artery giving the ports of southern British Columbia and Puget Sound access to the Pacific. Its seaward end is important as a focal point for commercial shipping and as an egress for Canadian and United States naval forces. Additionally, Soviet submarine operations in the northeast Pacific have been increasing. The growing strategic importance of this area, for which Canada has specific responsibilities under bilateral agreements with the United States, underlines the need for a more effective Canadian naval force on the West Coast.

Over the past two decades, with the development of nuclear power, the Arctic has become an operating area for submarines. Deep channels through the Canadian Arctic offer a means of passing between the Arctic and Atlantic oceans. In a period of tension or war, Soviet submarines could seek to operate off the deep channels of the Canadian Archipelago to intercept Allied submarines entering the Arctic. Moreover, the Soviets might use these channels in war to reach patrol areas in the North Atlantic, including the Labrador Sea. In light of these circumstances, the Canadian navy must be able to determine what is happening under the ice in the Canadian Arctic, and to deter hostile or potentially hostile intrusions.

At present, the Canadian navy cannot carry out in the Arctic these roles essential to our security and sovereignty. Some have suggested that the use of mines would be sufficient to counter the submarine threat. Canada, however, has no stocks of mines and no infrastructure to support mine warfare. Moreover, Western nations have no mines designed specifically for the Arctic. Such capabilities could be acquired, but they would be costly and, in light of their specialized purpose, neither flexible nor cost-effective. Even then, how would mines be laid in channels which are covered with ice? Once there, could control over them be maintained in light of the ever-present danger that ice movement would alter their location? When necessary, could they be removed, as is required by the 1907 Hague Convention? Could any Canadian government responsibly accept the risk of inadvertently sinking a neutral or friendly vessel?

Hull sections for the first Canadian Patrol Frigate being assembled in Saint John, New Brunswick using modern modular construction techniques.



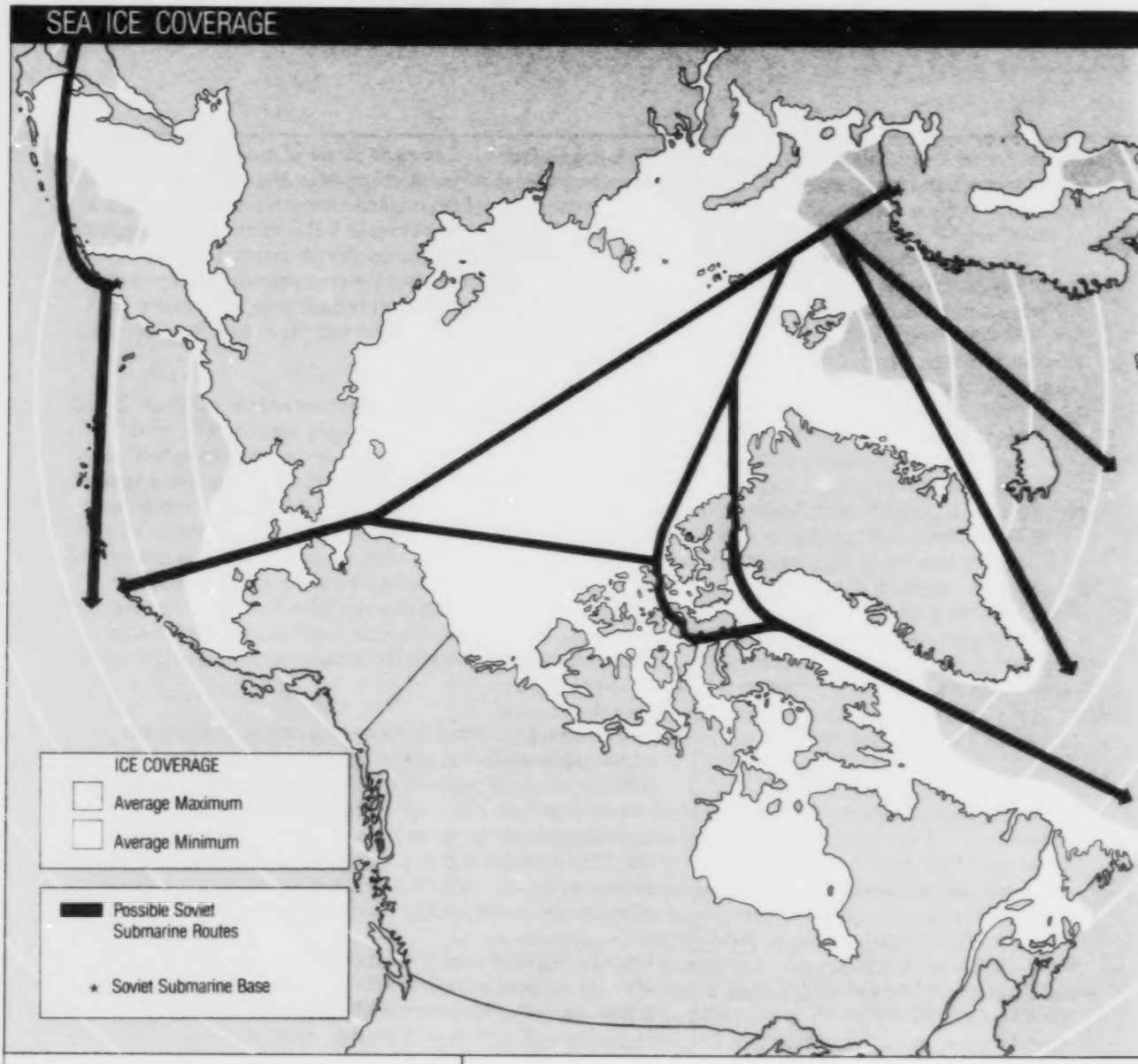
While there is little to recommend the use of mines defensively in the Arctic, an enemy could use them against us to good effect in our more southern waters. Canada's ports and internal waters are vulnerable to closure or disruption in war by mines laid by enemy ships, submarines or aircraft. Because Canada has no effective means of clearing mines, even a small number could close a port or waterway. Modern mines could be easily and surreptitiously laid just prior to hostilities, and activated when needed. Our current inability to meet this threat must be rectified.

Canada's areas of maritime interest are vast and our resources limited. No single system is capable of handling by itself the range of our maritime requirements. Aircraft, ships and submarines all have unique advantages which must be combined so that their strengths reinforce each other to produce a balanced, effective force. Our existing naval vessels are obsolete and insufficient to perform today's tasks, let alone those forecast for the next 15 years. Accordingly, the Government will pursue a vigorous naval modernization program. The goal will be greater flexibility, a more appropriate balance among air, surface, and underwater assets and the reorientation of Canadian naval forces toward effective operations in the Atlantic, the Pacific and the Arctic oceans.

Such a fleet will be created by continuing current programs and initiating others. The four newest destroyers now in service, the TRIBAL class (on average, 15 years old), are being modernized under a program announced in June, 1985. They will provide an area air defence capability and state-of-the-art command and control for our anti-submarine warfare task groups. This modernization will enable these destroyers, the ALGONQUIN, ATHABASKAN, HURON and IROQUOIS, to remain effective beyond the turn of the century.

To strengthen naval capabilities in the Atlantic and Pacific, replacement of surface warships will continue beyond the six Canadian patrol frigates currently under construction with a second batch of six frigates. These ships will carry modern helicopters to extend the distance and speed at which they can pursue submarines. The Sea King helicopters now in service are already at the end of their useful life and a process to select a new shipborne aircraft to be produced in Canada, is currently underway. To ensure our ports and waterways remain open, mine countermeasures vessels and equipment will also be acquired.

In all three oceans, underwater surveillance is essential to monitor the activities of potentially hostile submarines. Greater emphasis will be placed on underwater detection by continuing to develop Canadian sonar systems, by acquiring array-towing vessels to provide an area surveillance capability in the northeast Pacific and northwest Atlantic, and by deploying fixed sonar systems in the Canadian Arctic.



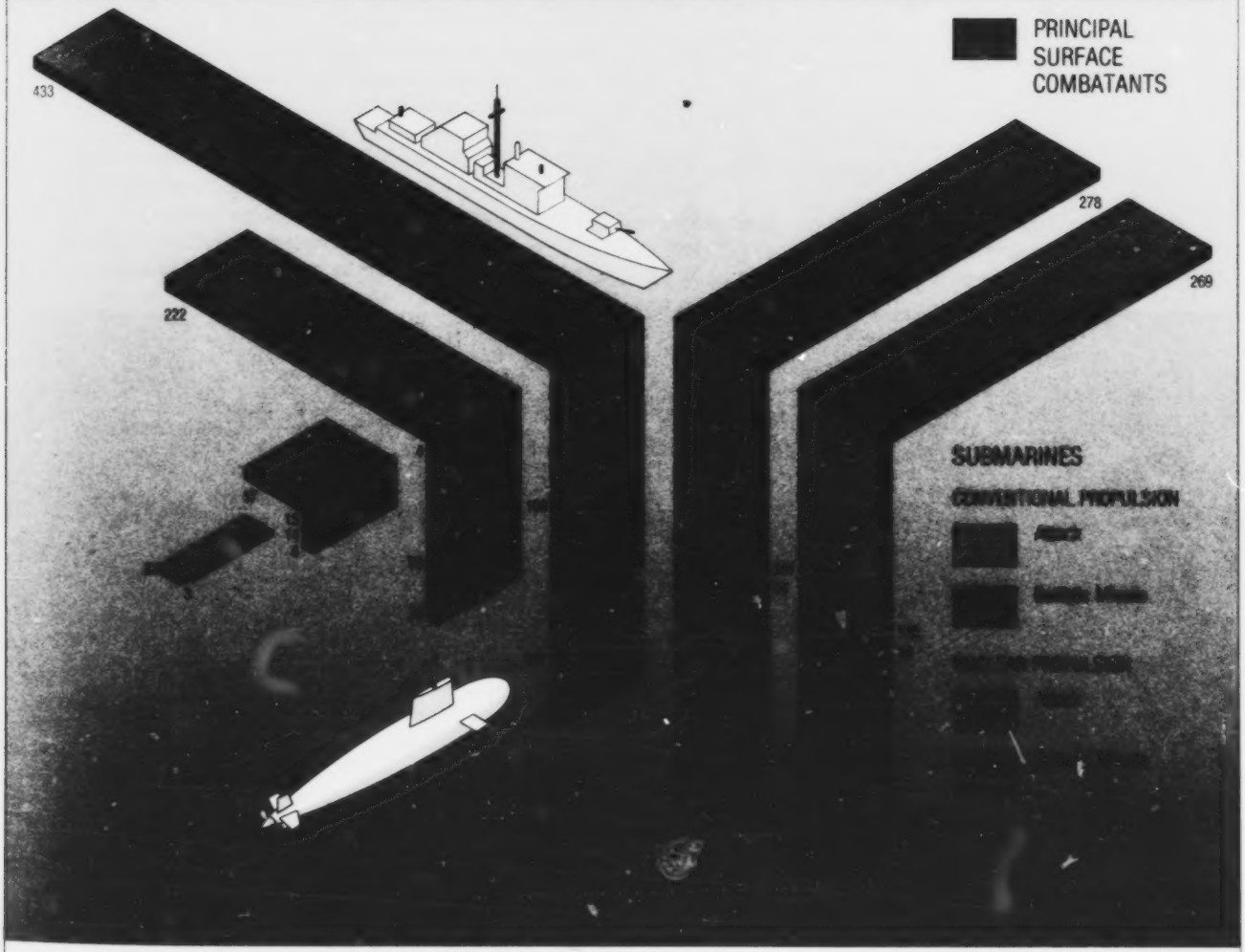
Soviet nuclear submarines can reach the Atlantic and the Pacific by travelling under the Arctic icecap

Submarines are essential to meet current and evolving long-range ocean surveillance and control requirements in the Atlantic and Pacific as well as in the Arctic. Nuclear-powered submarines (SSNs) are uniquely capable anti-submarine platforms. In contrast to a diesel submarine, the SSN can maintain high speed for long periods. It can, therefore, reach its operational patrol area faster and stay there longer. The SSN can also shift more rapidly from one area to another to meet changing circumstances. Essentially, it is a vehicle of manoeuvre while the diesel submarine is one of position. Given the vast distances in the three ocean areas in which Canada requires maritime forces and the SSN's unlimited endurance and flexibility, the Government has decided to acquire a fleet of nuclear-powered submarines to enhance the overall effectiveness of the Canadian navy.

Through their mere presence, nuclear-powered submarines can deny an opponent the use of sea areas. They are the only proven vehicle, today or

for the foreseeable future, capable of sustained operation under the ice. A program of 10 to 12 will permit submarines to be on station on a continuing basis in the Canadian areas of responsibility in the northeast Pacific, the North Atlantic and the Canadian Arctic. There they will be employed in essentially the same role now assigned to our diesel submarines. A fleet of nuclear-powered submarines is the best way to achieve the required operational capabilities in the vast Pacific and Atlantic oceans. In addition, the SSN is the only vessel able to exercise surveillance and control in northern Canadian ice-covered waters. SSNs will complement aircraft, destroyers and frigates in a vivid demonstration of Canadian determination to meet challenges in all three oceans. Such a highly capable, significant and versatile force will help to restore

FLEET COMPOSITION



Source: The International Institute for Strategic Studies, *The Military Balance, 1986-87*.

* Excludes France and Spain which do not participate in NATO's integrated military structure. France has 46 principal surface combatants and 23 submarines (6 SSBN, 2 SSN, 15 conventional). Spain has 23 principal surface combatants and 8 conventional submarines.

the effectiveness of the Canadian navy and prepare it to meet Canada's naval requirements well into the next century.

The acquisition of nuclear-powered submarines has been given careful study, both in terms of cost and of the mix between surface ships and submarines. A suitable SSN for Canada would be comparable in cost to an air defence frigate, but more expensive than a diesel submarine. The projected cost of replacing the current diesel submarines and acquiring a third batch of air defence frigates would, however, be roughly equal to a 10 to 12 nuclear-powered submarine program over the next 20 years. Consequently, since the SSN is a more capable anti-submarine platform for all three oceans, it is deemed to be the best investment for the navy. Thus, although the number of surface ships will be allowed to decrease slightly, the resulting naval force will be more balanced.

Nuclear propulsion for submarines is technologically mature and extremely safe. Half of NATO's attack submarines are nuclear-powered, and the proportion is almost the same for the Soviet Union. Current nuclear-powered warships and their reactors are designed to the most exacting standards and are operated by highly trained crews using rigorously applied procedures. For example, after 34 years and more than 3,000 reactor-years of operating experience, the United States Navy has had no nuclear accidents. Similarly, there have been no known safety hazards associated with the design and operation of British and French nuclear submarines. In the Canadian nuclear-powered submarine program, similar control processes and standards, including stringent national acceptance and operating criteria, will be applied.

An artist's impression of a TRIBAL class destroyer following completion of the modernization program.

Our nuclear-powered submarines will not be nuclear-armed. Their acquisition will be compatible with the positions that Canada has taken on the non-proliferation of nuclear weapons and with Canadian environmental protection laws and regulations. While it is likely that we will build these submarines in Canada on the basis of a proven design now in service with the naval forces of one of our allies, we will be fortunate in being able to rely on the proven competence, expertise and enviable safety record of the Canadian nuclear industry.

A phased acquisition of nuclear-powered submarines, underwater surveillance capabilities, 12 new frigates and modern shipborne aircraft, the update of the TRIBAL Class destroyers, and a mine countermeasures capability will provide Canada with a credible navy capable of monitoring activity in its three contiguous oceans and of deterring their use by adversaries.

Surveillance

The Canadian Forces conduct surveillance of Canadian air, land and sea jurisdictions in order to provide warning, assessment, and defence against hostile activity. Surveillance is an affirmation of Canadian sovereignty and a contribution to Canadian and collective security. Given the size of our territory and the limited resources available, effective surveillance calls for the imaginative use of new technology.

In protecting against the air threat, we have traditionally seen the North American continent as a single strategic entity and have co-operated with the United States through NORAD in the warning, assessment and defence against air attack. Recently, we have undertaken the North American Air Defence Modernization Program in partnership with the United States. The result will be a significant improvement in our capability to identify and intercept aircraft and cruise missiles around the periphery of North America. Modern radar systems will detect and track intruders so our tactical fighters can identify and, if necessary, engage them.

The North American Air Defence Modernization Program involves several new radar systems. The North Warning System, replacing the Distant Early Warning Line, will stretch from Alaska across the Canadian Arctic at approximately the 70th parallel and extend down the East Coast to Labrador. It will consist of minimally manned, long-range radars and unmanned, short-range, gap-filler radars. Over-the-Horizon Backscatter radars located in the United States will provide detection and tracking at very long range off the East and West coasts and to the south. The CADIN/Pinetree radars are obsolete and, in most cases, no longer needed. To complete and modernize radar coverage of coastal airspace, retention of three sites on the East Coast and one on the West Coast is being considered as well as installation of additional radars along the West Coast and the Alaska Panhandle.

The other components of the airspace surveillance system, the Canadian

An artist's impression of the new Canadian Patrol Frigate.

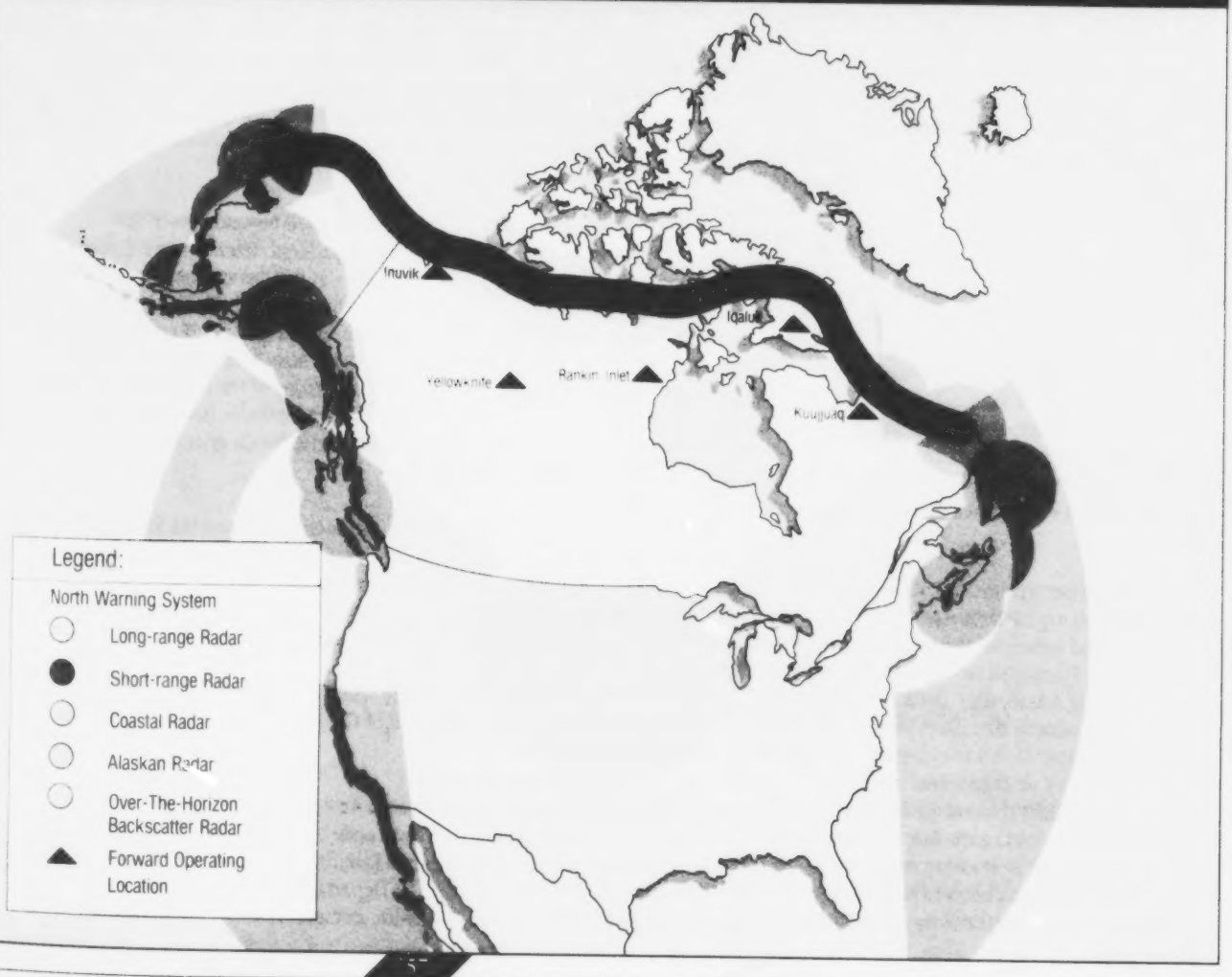
NORAD Region Operations Control Centre, the CF-18 fighters and the associated communications, are all part of the modernization program. We will be upgrading five existing airfields in the North to function as Forward Operating Locations for interceptors from Cold Lake and Bagotville. As recently announced, the new Forward Operating Locations will be Yellowknife, Inuvik, Rankin Inlet, Kuujjuaq and Iqaluit, where preconstruction preparations will begin this summer, with construction following in 1990. In addition, other airfields will be upgraded to serve as Dispersed Operating Bases for the Airborne Warning and Control System (AWACS) aircraft. We are increasing the number of Canadian Forces personnel in certain NORAD positions, such as at Over-the-Horizon Backscatter radar sites and as crew members on United States AWACS aircraft, components of NORAD which have been funded by the United States alone. We will maintain the strength of our fleet of CF-18s and arm them effectively. We also plan to participate in research on future air defence systems in conjunction with the United

States Air Defense Initiative.

Surveillance on and beneath the sea will be substantially enhanced by the naval programs already discussed. Even those naval assets, however, will not be sufficient to conduct year-round surveillance of the three oceans contiguous to our territory. Our capabilities are currently limited by the number of our long-range patrol aircraft. The flying time available from the present fleet of 18 Aurora aircraft is insufficient. Effective surveillance on the Atlantic Coast with 14 Auroras is barely achieved. On the Pacific, with only four Auroras, it is less than adequate. Our surveillance of the Arctic has increased, but we are still only able to launch a three-day patrol approximately once every three weeks. To remedy this situation we shall acquire at least six additional long-range patrol aircraft and will modernize our fleet of Tracker medium-range aircraft.

Our ability to detect, track and identify potentially threatening surface

AIR DEFENCE SURVEILLANCE PLAN



One of the radar stations in the Arctic to be modernized as part of the North Warning System.

activity on land and at sea is limited not only by the size of our forces but also by the technology available to them. It is possible that, in the short term, we will be able to increase considerably our surveillance capability by installing synthetic aperture radar in existing aircraft. This technology offers considerable potential for all-weather surveillance of surface targets. Our Defence Research Establishments are already investigating this potential with industry.

Looking ahead to the end of the century and beyond, space will increasingly be utilized in support of national defence aims. Canada's priorities for military space activity — surveillance, communications, navigation and search and rescue — flow naturally from our geography. Parliamentary committees of both the Senate and the House have in recent years recommended that Canada establish a national military space program. The Department is conscious of the need to co-ordinate its efforts with Canada's civilian space endeavours, both in government and in industry, to ensure that possibilities for co-operation and mutual support are fully exploited.

Canada will be exploring the use of space-based systems for many of its surveillance requirements. Space-based systems offer the promise of far more effective surveillance of activity on land and on the surface of the sea. Although technologically more challenging, these systems will, in time, replace the ground-based radars of the North Warning System to provide a detection capability adequate against the bomber and cruise missile forces of the future. Only space-based surveillance has the potential for complete coverage of Canadian territory and adjoining air and sea space.

The Canadian Forces use satellites for communications and in search and rescue. A program is already underway to introduce equipment which will use the United States Satellite Global Positioning System for highly accurate navigation. The Department is conducting research on extremely high frequency satellite communications in order to send

more information, more securely. It has also initiated a major five-year research program on space-based radar for the detection and tracking of aircraft and cruise missiles. Two concept and feasibility studies have already been completed by leading Canadian aerospace firms. Canada will also participate, along with other allies, in the United States TEAL RUBY experiments on space-based, infra-red surveillance. We are working with the United States in the bilateral Aerospace Defence Advanced Technology Working Group to identify advanced technology relevant to our future defence needs.

Should the results of our studies and those of the United States show that space-based radar is feasible, practical and affordable, the Department will have to devote, over the next 15 years, significant resources to the establishment of a space-based surveillance system for North American air defence. Decisions regarding our contribution to a joint space-based radar system, or the development of a national system, if a co-operative endeavour is not possible, will have to be taken in the course of the next 5 to 10 years. Failure to meet this challenge could mean forfeiting the responsibility for surveillance of Canadian airspace to the United States.

Canadian participation in the NORAD role of surveillance of objects in space began with the installation of a Baker-Nunn optical tracking system in Cold Lake in 1961. Our tracking systems are now out of date and are being phased out. Nevertheless, it is prudent, in light of the growing use of space for civil and military purposes and consequently the growing number of objects in space, that we remain involved in space surveillance. For this reason we will be examining options for continuing activity in this area after the closure of the existing facilities.

In developing space-based or space-related systems, Canada will continue to co-operate and share costs, experience, technology and responsibilities with the United States, as we have done for almost 30 years in NORAD. In air defence the nature and cost of technology have demonstrated the logic of a continental defence partnership. The same logic applies to space. We therefore anticipate continuing participation with the United States in all forms of early warning and surveillance relevant to North American air defence, whether the means be ground, air or space-based.

Perceptions on the military use of space have increasingly been affected by the American and Soviet research programs into strategic defence and the question this has raised as to the future relationship between the offensive and defensive elements in the nuclear balance. These developments should not obscure the fact that, regardless of the outcome of this research and debate, Canada will still require a capacity to exercise effective surveillance and control over its air, land and sea space. Such a capacity is important for our sovereignty as well as for our security. Our investigations into space activity are in furtherance of this goal and fully consonant with our security and arms control policies. Space is not and should not be the exclusive preserve of the super-powers. We are prepared to use it in pursuit of defence and other national objectives and in conformity with our international obligations.

Territorial Defence

The responsibility of the Canadian Forces does not end with the detection and assessment of threatening or hostile activity. Defence requires an ability to meet force with force. Fighter squadrons equipped with the CF-18 provide that capability in the air. Naval assets will provide an analogous capacity at sea. We must also have appropriate land forces to demonstrate presence, authority and effective defence within Canada in peacetime and to defend against incursions and sabotage in war.

Canada needs well-trained and well-equipped land forces, comprising both Regulars and Reservists, to protect military vital points and to deploy rapidly to deal with threats in any part of the country. Land forces now fall short of these requirements. Aside from the quick response capability of the Canadian Airborne Regiment, and the valuable but limited surveillance in the Arctic provided by the Canadian Rangers, there is insufficient trained manpower or suitable equipment earmarked specifically for these missions

In response, we will create additional brigades, mainly from the Reserves, to improve the land force's capability to undertake operations in the defence of Canada. There will also be a minimally-trained guard force created to protect vital military locations. These formations will supplement the present Special Service Force. They will be organized, for purposes of command, control and support, into a task force structure and provided with modern equipment. In addition, the Canadian Rangers will be expanded and their equipment improved.

We will also establish a northern training centre in the 1990s to ensure that forces for the defence of Canada are maintained at an appropriate level of combat readiness. We are seeking a location that comprises all the essential elements for our military purposes and for support of sea, land and air training in Arctic conditions. The selection of the site for the centre will take into account the views of native peoples, existing facilities and local land uses.

We will continue, under the Canada-United States defence agreements, to address the conventional threat in its broader North American context. This goal will be achieved by contributing naval, land and air forces to joint training and operations.

Consolidation in Europe

The current Canadian military commitments in Europe are spread over two widely separated regions. The 4 Canadian Mechanized Brigade Group and the 1 Canadian Air Group are stationed in southern Germany. The Canadian Air-Sea Transportable (CAST) Brigade Group and two Rapid Reinforcement fighter squadrons, stationed in Canada, are committed to northern Norway in time of crisis.

Canada has also undertaken to provide a battalion group to the Allied Command Europe Mobile Force (Land) (AMF(L)), and a fighter squadron to the Allied Command Europe Mobile Force (Air) (AMF(A)), for deployment to NATO's Northern Region. Both the battalion group and the fighter squadron are stationed in Canada. The latter is one of the two Rapid Reinforcement squadrons already committed, as cited above, to northern Norway. During the past two years Canada has increased its forces stationed in Europe by about 1,500 and the number will grow further with improvements such as low-level air defence.

It has been obvious for some time that these widespread land and air force commitments in Europe represent a dilution of valuable combat resources, and cannot reasonably be supported or sustained from an ocean away in the event of hostilities. They force us to maintain widely separated lines of communication for which we have insufficient strategic transport. We also lack the theatre-level logistics and medical formations to support and maintain these commitments. There are particularly severe problems associated with the deployment of the CAST Brigade to northern Norway. The force requires some weeks to reach Norway, making timely deployment questionable, and it cannot make an opposed landing. Moreover, once deployed, it would be extremely difficult to reinforce and resupply, particularly after the start of hostilities. The result is that, even if successfully deployed, the brigade could rapidly find itself in an untenable position.

The same difficulties with reinforcement and resupply affect our fighter squadrons assigned to northern Norway. They can deploy quickly and perform well, but this is also a small force which would be much more effectively employed as part of a concentrated air commitment in those locations where we have already made large investments in survivable support facilities tailored to the unique requirements of the CF-18.

If these commitments in northern Norway were to be met fully and effectively, the deficiencies cited above would have to be rectified. This could only be done at great cost. If they were not corrected, it would be as obvious to our opponents as it is to us and, consequently, these commitments would contribute little to deterrence.

The Government has concluded that consolidation in southern Germany is the best way to achieve a more credible, effective and sustainable contribution to the common defence in Europe. Consolidation will reduce, although not eliminate, the critical logistic and medical support problems posed by our current commitments. It will ensure that in time of need there will be an identifiable, operational and sustainable Canadian force in Europe.

The Special Service Force trains with the Canadian Rangers in the High Arctic.

A Canadian Leopard C1 tank on exercise in Germany.

The task of the Canada-based CAST Brigade Group will, therefore, be shifted from northern Norway to the central front, thus enabling the Canadian army to field a division-sized force in a crisis. The resulting combat power will be enhanced and made more effective than what could have been achieved by two separately deployed brigades. Consolidation will thus be of significant value to NATO's Central Army Group, as the size of its operational reserve will be doubled.

For the division to be fully effective in a two-brigade posture, a number of other improvements will be necessary. Over time, a large part of the Canada-based brigade's equipment and supplies must be pre-positioned in Europe. Even more important will be the acquisition of new tanks. Part of the division headquarters and some other divisional troop elements will be stationed in Europe. The logistics and medical elements necessary to support our European commitments will be provided along with additional airlift capability. The creation of the necessary support structure will require material and personnel resources, the latter being drawn chiefly from the Reserves, with an appropriate cadre of regulars stationed in Europe.

Canada will also shift the commitment of the two Canada-based Rapid Reinforcement fighter squadrons from northern Norway to southern Germany. The concentration of five fighter squadrons on our two existing air bases there will enable us to make more effective use of those facilities and will significantly increase Canada's contribution to the 4th Allied Tactical Air Force. Operating from airfields protected by Low-Level Air Defence units and equipped with hardened aircraft shelters, Canada will contribute an Air Division capable of multi-role operations.

The decision to shift the commitment of the CAST Brigade and the two fighter squadrons from northern Norway has not been taken lightly. Great care has been and will continue to be taken to ensure that our decision will not be strategically or militarily damaging to Norway or to the Alliance. To this end, the Minister of National Defence has conducted an extensive series of discussions with the Secretary General of NATO, the Norwegian Minister of Defence and other Allied defence ministers, and the Major NATO Commanders.

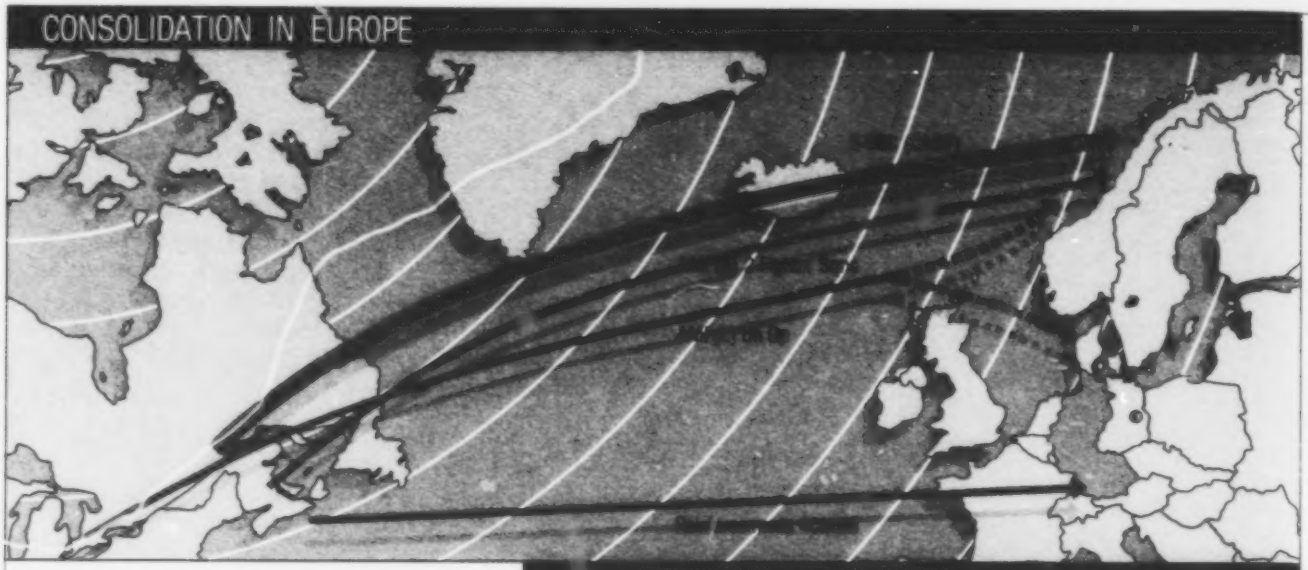
Most recently, we have consulted NATO formally, as nations undertake to do when contemplating a change in their commitments to the Alliance. We did not expect unanimous support for our proposals, but are confident, from the assessment which NATO has offered, that satisfactory alternative arrangements for the defence of northern Norway are in hand. We are also discussing with the Norwegian government other ways of continuing our very close and rewarding bilateral military relationship.

Those consulted understand that Canada wants to increase its contribution to the conventional deterrent to make it more effective and thereby contribute to raising the nuclear threshold. They understand that, by concentrating and streamlining combat forces and their associated support, supply and sustainment arrangements in one area, we will make the Canadian Forces in Europe more effective and thus enhance our contribution to collective defence.

Canada will, however, maintain the existing battalion group commitment to the AMF(L) for service on the northern flank. The AMF is a small, mobile, multinational task force which could be sent, at short notice, to any threatened flank of Allied Command Europe. It is a jointly organized and supported NATO unit available to the Supreme Allied Commander, Europe (SACEUR) to demonstrate solidarity and the Alliance's ability and determination to defend itself against aggression. As such, it does not pose problems of logistics support of the magnitude encountered with the CAST commitment. Additionally, the Government believes that Canadian participation remains a useful and valuable contribution to deterrence in Europe.

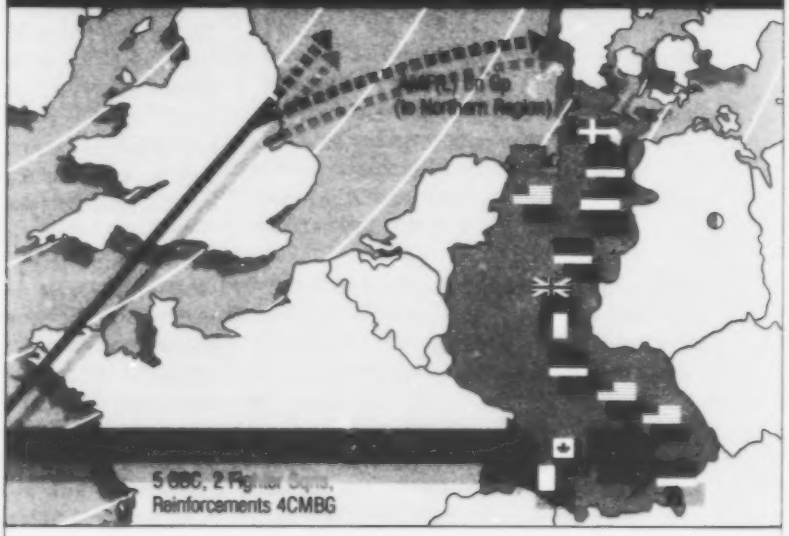
While Canada has indicated that it could not provide a battalion group for operations in NATO's Southern Region, there are two possibilities for deployment should the AMF(L) be assigned to the Northern Region. One is in precisely the same area in which Canadian Forces have trained for the CAST commitment. To simplify deployment, we will leave, for the use of our AMF(L) battalion, much of the equipment now pre-positioned for the CAST Brigade Group. The other possibility is to deploy the AMF(L) to Denmark in order to defend the Baltic approaches.

CONSOLIDATION IN EUROPE



The Past

The Future



To facilitate the adjustment of our commitments to Central Europe and to increase the overall effectiveness of our forces, modest changes will be required in the posture of our forces stationed in southern Germany. In the long run, we must reduce the mutual interference of collocated land and air forces on our bases at Lahr and Baden-Soellingen. We must improve the deployment of the land forces relative to their wartime missions and make provision for the medical and logistics support which has been ignored for so long. Significant improvement in combat effectiveness cannot occur without the early conclusion of satisfactory arrangements with our allies to provide needed facilities and host-nation support.

CFB Baden-Soellingen offers survivable support facilities like this hardened aircraft shelter

Over the longer term, we will be prepared to discuss with our allies and with SACEUR possible alternative locations for our land forces in Germany on the understanding that the considerable costs associated with any change in our current posture would not be our responsibility. In the meantime, however, we will consolidate around the existing facilities in which we have invested so heavily over the years.

The Reserves

In the early days of the nuclear threat, Canada's naval, land, and air reserves were cut dramatically. It was commonly believed that any war would be short, and the relative value of reserves, which would take some time to mobilize, was therefore seriously questioned. By the 1970s, the Reserves had little capacity to contribute usefully to the country's defence. This situation has been exacerbated by budgetary stringency, which limited the resources available to the Reserves even more than those for the Regular Force. In most NATO countries reserve forces outnumber their regular force counterparts. Canada stands out as a glaring exception, with only one quarter as many active Reservists as Regulars.

It is now clear that it is both impractical and undesirable to try to meet all of our personnel requirements through the Regular Force. The costs attached to an all-volunteer, full-time military force have become too high. In many cases, the tasks which the Regulars are called upon to undertake can be carried out by trained Reserve personnel. Furthermore, we will be able to address the serious multiple-tasking problems now facing the Regular Force if appropriate numbers of trained Reservists are available.

If the Reserve Force is to be used fully and effectively, the distinction between Regular and Reserve personnel must be greatly reduced. Their responsibilities must be integrated into a Total Force Concept. For example, a unit responding to an emergency could be manned by any mix of Regulars and Reservists. The proper ratio for a specific commitment would be determined by the type of unit, the reaction time and the skills needed. If we are to rely to a greater degree on the Reserves to augment the Regular Force, the size of the Reserves will have to be significantly increased and their training and equipment substantially improved.

At present, the Reserve Force is divided into a number of subcomponents. The largest of these is the Primary Reserve, which comprises formed units that train frequently. Another subcomponent, the Supplementary Reserve, is made up of former Regulars and Primary Reservists, who may serve voluntarily or be placed on active service in an emergency, but who are not required to take continuous training. The Supplementary Reserve must also be revitalized to permit it to make up most of the balance of reserve requirements beyond the Primary Reserve.

A Reservist from 2 Field Engineer Regiment (M) during a Militia exercise

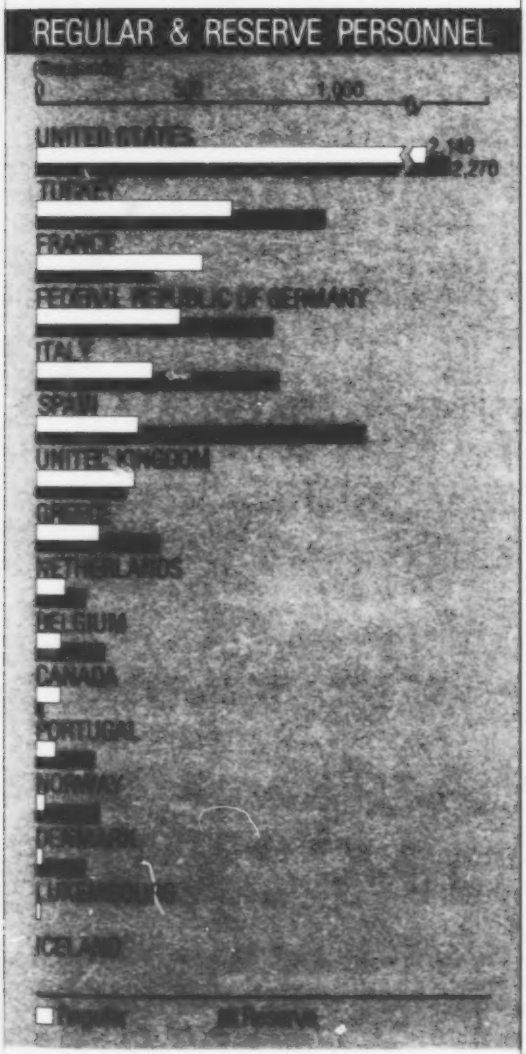
The other two elements of the Reserve Force are the Cadet Instructor List and the Canadian Rangers. The size and role of the Cadet Instructor List, a group which provides the command structure and most of the instructors for the Sea, Army and Air Cadets, will remain as they are. However, while the role of the Canadian Rangers will remain basically unchanged, its significance as a surveillance force and as a visible expression of Canadian sovereignty in the North requires its expansion and an improvement in the equipment, training and support it receives.

In a Total Force structure, the Reserve Force will be developed not only to augment the Regular Force but also to take on other specific tasks. The Naval Reserve will have two wartime functions of its own: Naval Control of Shipping and Maritime Coastal Defence, including the clearing of mines. The Militia will contribute to defence operations in Canada and elsewhere in North America, and will train replacements for land forces deployed overseas. The Militia will also establish a relatively large force of lightly armed guards to protect military vital points, and make a major contribution to the logistic and medical organizations required to support our consolidated European commitments. The Air Reserve will be more closely associated with the regular air force through the establishment of a number of integrated Regular-Reserve units. The Communication Reserve will continue to contribute to the provision of strategic and tactical communications. All of this will, of course, require a significant increase in strength as well as new and improved equipment.

The opening phase of Reserve modernization is already under way and will be pursued with vigour. It will greatly improve the equipment and training of the Primary Reserve. We will then be better able to fulfil many of our high-priority commitments, including maritime and NORAD operations in Canada and land and air missions in Europe. In the longer term, it will be necessary to implement a complete Reserve Force Development Plan. As a result, Reserve strength will increase to about 90,000. The revitalization of our Reserves will contribute enormously to our ability to meet fully and effectively all our military commitments. The Government recognizes the value of retaining Reserve units in their traditional locales and will make every effort to do so.

Reserve expansion will require a larger pool of trained officers. For this reason, we will study the reactivation of university training programs like those which existed before 1970, the Canadian Officers' Training Corps, the University Reserve Training Plan and the University Naval Training Divisions.

In order to achieve these objectives, pay and benefits will have to be improved. Resources to increase Reserve recruiting will also be required. Terms and conditions of service must be altered to make it easier for members to serve and employers will be encouraged to support Reserve service by members of their work force.



* Estimates based on The International Institute for Strategic Studies, *The Military Balance, 1986-87*, p. 215, except for Canadian data.

The Canadian Forces must have a highly motivated, well-trained, properly equipped Reserve to be able to meet Canada's defence commitments and to provide a base for expansion whenever that may be required.

Funding the Defence Program

This White Paper establishes a blueprint and sets the direction of defence policy to the end of the century. Implementing this new defence policy will be expensive and will pose a significant challenge for this and future governments. It has never been easy for democratic governments to find, in peacetime, the resources necessary for defence. It is certainly not easy now. The pressures for economic and social programs designed to bring prosperity and to provide opportunities for fuller and richer lives make defence spending seem, at least to some, an unattractive use of national resources. Social benefits, however, are the fruits of a secure and free society. This Government accepts the preservation of such a society as its fundamental responsibility and will, therefore, provide the resources necessary to make the Canadian Forces operationally effective and responsive to the challenges of the 1990s and beyond.

Defence planning is, by its very nature, long-term. Most major defence projects, whether they concern new ships, aircraft, or other weaponry, take at least ten years to produce results. To provide a planning framework in which equipment decisions respond to, rather than lead, policy, the Government has developed a new long-term planning and funding process. A rolling five-year funding plan will be introduced within a fifteen-year planning framework. An annual Cabinet review, each autumn, will establish firm budgets for the following five-year period, and planning guidance for the remaining ten years.

The Government is committed to a base rate of annual real growth in the defence budget of two per cent per year after inflation, for the fifteen-year planning period. Increased resources over those provided by this planned funding floor will be necessary in some years as major projects forecast in this White Paper are introduced. The first annual review of the defence program will be conducted in September, 198[illegible], at which time the second phase of the Ship Replacement Program will be examined to determine the annual level of incremental funding required over the two per cent base line for the first five-year period.

The new planning system will enable the Government, on an annual basis, to make adjustments to the defence program reflecting changes in military, technological, strategic and fiscal circumstances. Such adjustments will be explained and reflected when the annual departmental estimates are tabled.

VIII Foundations for Defence

The men and women of the Canadian Forces form the front line of Canada's defence. They can only be effective, however, if their efforts are based on firm foundations. They require the leadership that comes from effective command and control. The Government must have in place organizational structures which will make it possible, in a crisis, to mobilize the human and material resources of the country. It must also have the legal authority to respond appropriately in crisis or war. The armed forces must have the industrial base to supply them with essential equipment and materiel. Moreover, all aspects of defence policy must be supported by vigorous research and development in order to maximize our defence effort.

Command and Control

The present structure for the administration of defence policy and the command and control of the Canadian Forces is the result of a long evolution. Today we have a defence structure that is distinctly Canadian, has served us well and is essentially sound.

In the post-war years, Canada's three services became increasingly integrated. In 1964 the responsibility for their command and control was vested in the newly created position of Chief of the Defence Staff. This decision was followed by the Canadian Forces Reorganization Act in 1967, which unified the services into a single Canadian Armed Forces. In 1972 a Management Review Group recommendation led to the amalgamation of the Canadian Forces military headquarters and the departmental headquarters. The new structure enabled military officers and civilian officials to develop advice for ministers more effectively.

The unification of command responsibilities under the Chief of the Defence Staff has made a major contribution to the formulation of defence policy. The Chief of the Defence Staff provides a single source of military advice to the Government and, as the leader of the military profession in Canada, he is ultimately responsible for the operational command and control and logistic support of all Canadian Forces.

The Chief of the Defence Staff receives essential support from his senior advisers, the commanders of the functional commands. A recently strengthened Armed Forces Council is the forum through which the commanders and senior staff officers help develop policy advice for the Chief of the Defence Staff. This change will re-emphasize operational effectiveness and focus attention on the enhancement of our defence capabilities.

An OBERON class submarine undergoes an 18 month refit at HMC Dockyard in Halifax.

When the three services were unified, the commands were organized by function, such as air transport, training, and air defence. Previously, however, the army had been structured on a geographical basis. The great distances between units required the delegation of specific authority and responsibility to regional commanders.

In an attempt to maintain the functional concept and to react to regional responsibilities, the Canadian Forces eventually adopted a combined functional and regional command structure. Nevertheless, regional operations continued to depend largely on army units and consequently required, in most emergencies, the transfer of command of troops and resources among commands.

It has become evident that in a crisis our present structure would not suffice and would have to be reorganized at precisely the moment when continuity would be essential. In order to simplify and strengthen Canada's defence structure, the Government intends to establish a geographically oriented regional command structure under the Commander, Mobile Command. He will be responsible for aid of the civil power and assistance to civil authorities, co-ordinating support to the Militia, and the operation of army mobilization in each region.

This new structure will be developed from existing resources. Where appropriate, air and naval officers will be assigned to regional headquarters. Separating functional and regional responsibilities will simplify the chain of command and relieve National Defence Headquarters and other command headquarters of detailed regional responsibilities.

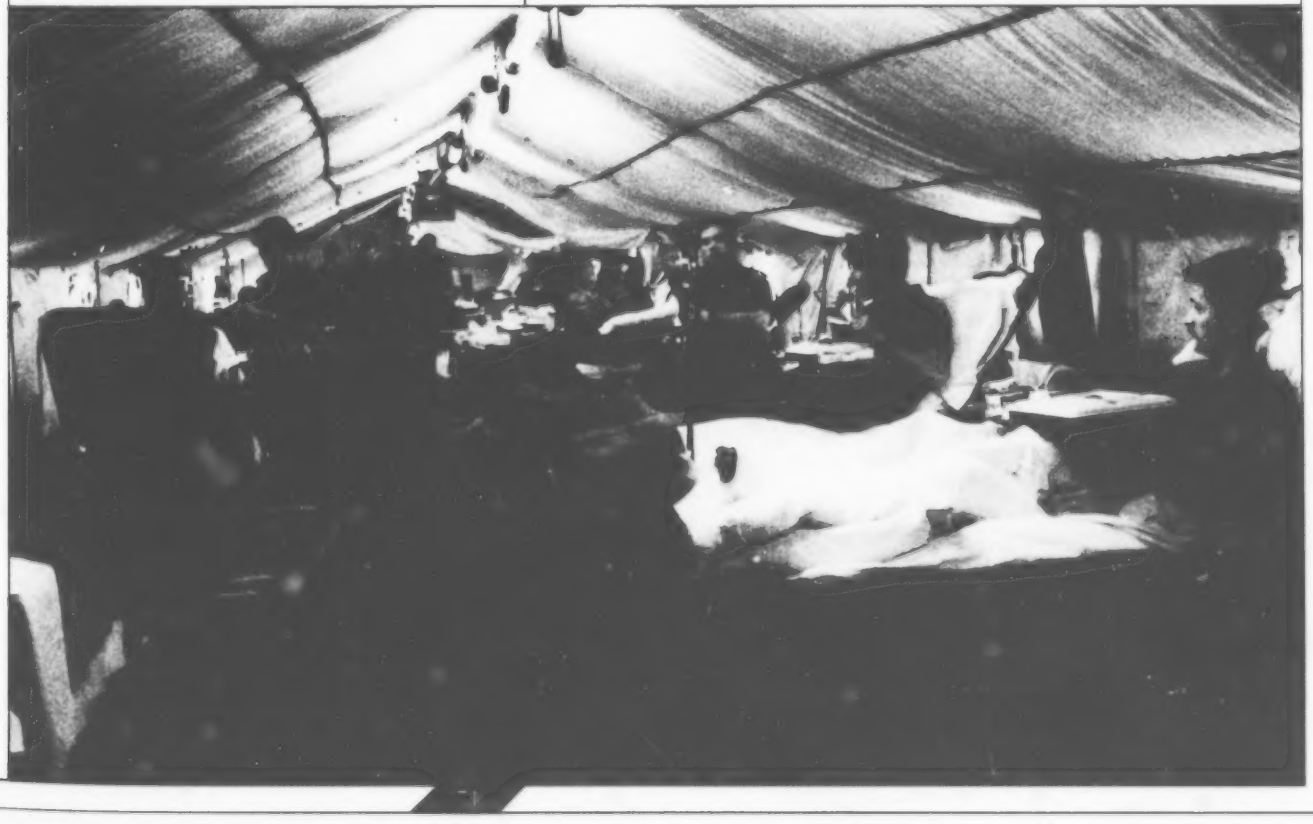
Morale and esprit de corps are important components of service life and are vital to the cohesion of units under stress in crisis and war. These factors and the essential differences in operational environments must be acknowledged in the structure of the Canadian Forces. It was towards this end that the promise to issue three distinct uniforms was promptly put into effect by this Government. In the future we shall ensure that the maintenance of morale and the special needs of service life are recognized and respected. We must produce a defence structure that is resilient and able to exploit Canada's defence potential.

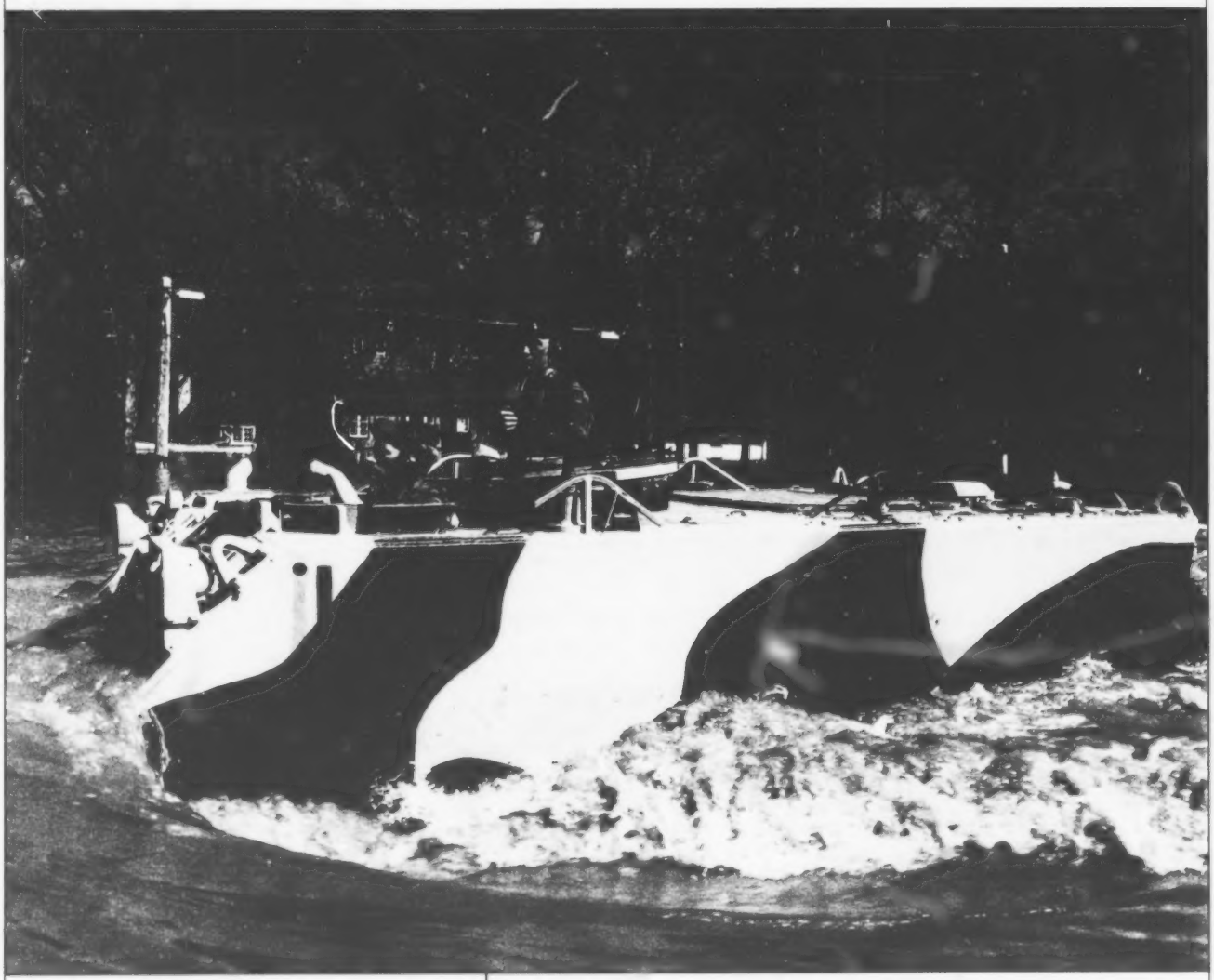
Mobilization Planning and Preparedness

The mobilization of human and material resources of the country in time of crisis must receive more attention. Preparations need to be made in the areas of transportation, communications, energy, food supply, medical services and construction. During the past two years, the Government has increased the emergency planning staffs in the key civil departments concerned with mobilization planning. The Provinces are participating fully in the planning process and discussions are proceeding with the private sector.

The Government will emphasize the importance of emergency planning by all departments. In addition, legislation will be introduced to establish formally and give a clear mandate to Emergency Preparedness Canada, the agency responsible for co-ordinating the civil aspects of government-wide mobilization planning.

A field hospital in operation during manoeuvres.





Emergency assistance provided by soldiers of Princess Patricia's Canadian Light Infantry.

In an international crisis, national emergency agencies will be responsible for the rapid mobilization of Canada's civil potential. The Government might, for example, need to direct the use of sea, land and air transport for the movement of military personnel and supplies, as well as to take special measures to accelerate defence production. Measures might be required to control and regulate the production and distribution of energy and foodstuffs, to redirect strategic materials and to provide for the early and orderly mobilization of the Reserves. The authority for implementing such measures and for activating the national emergency agencies will be contained in new emergencies legislation.

New Emergencies Legislation

Canada is one of the very few developed nations without comprehensive emergencies legislation. The broad and sweeping powers of the *War Measures Act* are excessive in relation to national emergencies in peacetime. While the *War Measures Act* is certainly adequate for war or invasion, it incorporates few safeguards against abuse. Other statutes with emergency provisions provide little more than an incomplete patchwork of inadequately safeguarded emergency measures. In addition, existing emergencies legislation does not adequately recognize either the role or the legitimate interests of the Provinces in providing a national response to national emergencies.

The alternatives to comprehensive emergencies legislation are of doubtful value. The Crown prerogative and the common law doctrine of "necessity" provide, at best, a shaky and uncertain basis for effective action in an emergency. Reliance on ad hoc legislation enacted in the heat of a crisis could lead to less balanced and restrained measures than those based on legislation carefully considered by Parliament during normal times. Furthermore, such an ad hoc approach could delay the response if Parliament were not in session, and would be impossible if Parliament were dissolved when the emergency arose.

Therefore, to ensure that it will be in a position to provide adequately for the safety and security of the Canadian people, the Government intends to introduce comprehensive legislation to deal with the full range of possible national emergencies.

The new Emergencies Act will authorize the Government, in a national emergency, to take the necessary, special, temporary measures. The legislation will include adequate safeguards to protect fundamental rights and freedoms and to limit both the duration and the substance of exceptional measures to no more than is needed. It will also respect the interests of the Provinces, and provide for Parliamentary review when the legislation is invoked and at every stage while it is in effect. The existing *War Measures Act* will be repealed.

In the context of national security, the Emergencies Act will provide the legal authority for the Government to respond to an international crisis or war. The Act will enable the Government to implement preparatory and preventive measures, in concert with Canada's allies and in an orderly and non-provocative way. The Government will be able to begin civil mobilization to prepare the nation for war. Such a capability to demonstrate readiness and resolve is an important part of the strategy of deterrence.

Defence Industrial Preparedness

Maintaining the conventional forces of NATO as a credible deterrent requires that our industrial base be able to respond to the needs of our armed forces and those of our allies, both for initial readiness and for follow-on sustainment.

A key element of both readiness and sustainment is the ability to equip and resupply military forces. Sustainment requires an assured source of materiel well in excess of affordable stockpiles. In July 1987, a departmental task force will make specific proposals to enhance defence industrial preparedness planning. The task force, in conjunction with the departments of Supply and Services, Regional Industrial Expansion, External Affairs and others, is developing a method of measuring the ability of defence industry to provide assured support to critical operational items used by the Canadian Forces.

A defence scientist works on the guidance and control system of the Sea Sparrow shipboard air defence missile.

Extensive study within NATO, particularly by the United States, has shown that carefully planned investment in industry significantly increases preparedness. Examples include the advance procurement of critical components or test equipment and improvements in manufacturing technology. On a continuing basis and as determined through extensive study, industrial preparedness measures will be pursued by the Government to enhance the responsiveness of the defence industrial base.

The increasing complexity and high cost of modern weapons systems are such that it is not feasible for Canada to undertake most major defence development projects on its own. Rising costs and growing technological complexity are forcing many nations to view co-operative research, development, production and support as a logical complement to collective defence. It is in our national interest to pursue armaments co-operation through arrangements with other nations both within and outside the NATO Alliance. Where major equipment must be procured offshore, the Government will promote teaming arrangements with Canadian industry to foster technology transfer and the creation of an indigenous support base. Canada also recognizes the military and economic advantages of co-operating with other nations in fulfilling mutual defence equipment requirements. Bilateral research, development and production agreements have been made with the United Kingdom, the Federal Republic of Germany, the Netherlands, France, Italy, Denmark and Norway as well as with Sweden.

In acquiring equipment, the Government will pay greater attention to the long-term industrial implications. For example, the need for indigenous support and repair and overhaul capability for new equipment will be addressed from the beginning. To increase consultation with industry, a Defence Industrial Preparedness Advisory Committee, composed of industrialists and academics, has recently been established. This forum affords the defence industrial community an opportunity to develop innovative approaches to defence industrial preparedness.

We will continue, within the Alliance, to increase efficiency by consolidating Allied requirements where possible and sharing production for common use. Canadian industry is an important element of the North American Defence Industrial Base. Through participation in Canada-United States Defence Development and Defence Production-Sharing Arrangements, Canada co-operates with the United States in the development and production of defence equipment. These programs allow Canadian industry to specialize in selected areas through access to the American military market. We will continue to work closely with the United States in an effort to foster the common use of this base.

Deep dive experiments are conducted at the Defence and Civil Institute of Environmental Medicine in Toronto, Ontario.

There is a high degree of commonality between our critical operational items and those of the United States. Security of supply could be greatly enhanced through co-production arrangements. For example, a recently completed Canada-United States study has concluded that the capability to increase production of conventional precision-guided munitions in an emergency could be significantly improved by further developing Canadian sources of critical components within the North American Defence Industrial Base. Other initiatives in progress will contribute to the strengthening of that base. These include participation by government and industry in both countries in analysing a variety of production capabilities to better satisfy mutual defence needs. The gas turbine engine, which Canadian industry produces for aircraft, ships and vehicles, is but one example. The growing importance of Canadian industry to the overall North American Defence Industrial Base and the need to enhance further Canada-United States co-operation were recognized at the March 1985 summit between the Prime Minister of Canada and the President of the United States. In their joint release, they stated that further measures would be taken "... to facilitate defence economic and trade co-operation and joint participation in major defence programs"

The implementation of the equipment and facility acquisition programs required to give effect to the policies and commitments proposed in this paper will significantly increase procurement by the Department of National Defence. A concerted effort to find and train additional specialized people to manage effectively the new acquisition programs will be needed. This procurement will also place additional strain on other departments and on our existing defence industrial base. Both government and industry will need to ensure that appropriate resources are allocated to the task.

Research and Development

Modern armed forces are dependent upon advanced technology for effective military operations. Consequently, advances in science and technology are key considerations in strategic policy, equipment purchases, military doctrine and operations, equipment development and maintainability, and the selection, protection, performance and training of military personnel. In the last decade there have been major advances in computers, software, integrated circuits, sensors, propulsion, materials and other technologies that now form the foundation for the next generation of defence systems. These advances are changing the nature of military science to a degree unparallelled in history.

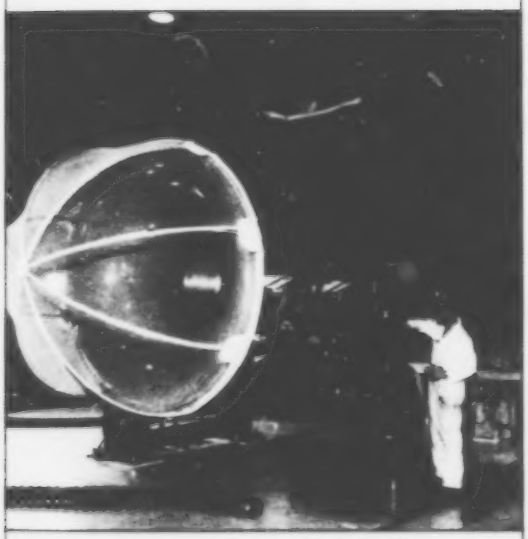
Wind tunnel experiments at the Defence Research Establishment, Valcartier, Quebec.

The current technological advantage enjoyed by the West is a direct result of earlier investments in research and development and the continuing search for advanced technologies by industry, universities and defence laboratories. However, this technological edge has been diminishing as a result of declining R&D efforts in the West and of massive Soviet efforts to develop new technologies and to copy Western technology. For example, recent estimates give the Soviet Union a two-to-one advantage over the United States in the numbers of scientists and engineers employed in research and development. The Government will make every effort to eliminate the illegal transfer of technology to Warsaw Pact nations.

The transfer of defence research and, particularly, development to the private sector is important for the application of new technologies to Western defence. The Department of National Defence has been steadily increasing the funds contracted to Canadian industry for R&D: in the 10-year period 1977-1987, the expansion has been almost sevenfold. Such contracting will continue to increase. In addition, the Government is considering a Defence Industrial Research program to help domestic industry establish a technology base from which to meet the Canadian Forces' requirements for new equipment, resupply and life-cycle support. The program would help mobilize those areas where Canadian industry has strengths and would serve as a channel for information exchange and technology transfer between the Canadian Defence Research Establishments and the defence industrial community.

In co-operation with other departments, the Department of National Defence will pursue policies to increase R&D capability and expertise in Canada. The Defence Industry Productivity Program of the Department of Regional Industrial Expansion is an example of such an initiative. Canadian technology will be incorporated into National Defence operations and plans wherever possible in order to help strengthen Canada's defence industrial capability.

The development and production of competitive defence equipment for Canadian and Allied forces will require the judicious employment of emerging technologies to provide the necessary military capability at affordable cost. For this purpose a broad base of scientific and engineering expertise is maintained at a level sufficient to understand, compare and assess the capabilities of the most advanced products available and to judge the potential applications of new technologies. This level of knowledge is derived from defence research and development in government, industrial and university laboratories. The information obtained is pooled with our allies through a number of bilateral and multilateral agreements. In return we gain access to a volume of knowledge far beyond that which can be created at home.



Modern sound suppression equipment permits powerful jet engines to be tested without disturbing the environment.

In addition to providing the technology to meet the needs of the Canadian Forces, the R&D activities of the Department have made significant contributions to meeting civilian needs and to the Canadian economy. Designed and constructed in Canadian defence laboratories, the Alouette ionospheric research satellite made Canada the third country in space and laid the foundation for the Canadian space industry. The Department's leadership in space continues with the international Search and Rescue satellite program, which has dramatically aided in the localization of both air and sea emergencies, and with new initiatives on extra high frequency communications and space-based surveillance technology.

The Department has also supported the aircraft industry in Canada by assisting in the establishment of the technology base in computer-aided design, small turbine jet engines and composite materials. Another field that has benefited from technology transfer from defence laboratories is lasers. The rise of Canadian industry as a supplier of laser systems internationally rests on the technology of the carbon dioxide laser which was invented at the Defence Research Establishment, Valcartier.

Defence research extends well beyond the direct application of engineering, physics and chemistry to hardware design. The ability of humans to cope with complex defence systems under continuous operational conditions will be a key determinant of future military effectiveness. Meeting these challenges will require new research in information, command and control, and all of the attendant aspects of human performance and behaviour.

Operational research is fundamental to the improvement of tactics and logistics. It enables optimum use to be made of equipment in service, and helps ensure the best plans for acquisition of new equipment.

To broaden the understanding of defence problems and to stimulate systematic research by well-qualified scholars, the Department maintains a Military and Strategic Studies program in a number of Canadian universities. To date, teaching and research have emphasized the more classical areas of strategic studies, dealing with international relations, political trends and the balance of power. The Department will broaden its support to encourage teaching and research in other areas important to defence analysis, such as the economics of defence, operational research and systems analysis and the implications for security of technological developments.

IX The Armed Forces and Society

In their primary role, the Canadian Forces make a vital contribution to keeping Canada a free, peaceful and democratic society. The Canadian Forces make other valuable contributions to society in ways that are not always obvious or fully understood. In living the concept of service before self, members of the Forces and their families develop to a particularly fine degree those qualities of citizenship and community service that bind us as a nation and focus our national identity. Through application of skill, determination and discipline, Canadian service personnel have earned an international reputation as exemplary soldiers and citizens. Canada's participation in peacekeeping has earned us a reputation as responsible, reliable and trustworthy members of the world community. The Forces enrich the civilian labour force through the addition of trained, motivated and educated individuals. In the normal course of their professional duties they offer emergency assistance to the public. In private life they are well-known for support of community activities.

The Canadian Forces are an integral part of our society, yet, in a sense, they remain somewhat separate from it. Their duties and rules of daily behaviour set them apart from their fellow citizens. There is a risk that this separation could lead to estrangement. The Canadian Forces tend to be concentrated in only a few areas of the country, which are often distant from large urban centres. The Reserves, which once were the major link between the Forces and society, have been allowed to run down. Moreover, attitudes of the public toward defence have doubtless been affected by concern about, or even distaste for, some of the unpleasant realities of international security.

It must be recalled, however, that Canada's military experience has made a unique and dramatic contribution to our national development. In this spring of 198~ it is fitting to recall that ~0 years ago, at Vimy Ridge, Canadians from all parts of this country and from all walks of life, working together as a superb fighting machine, won one of the greatest victories of the First World War. From a comradeship born of shared experience in the face of adversity, sacrifice and danger, blossomed a sense of self-confidence, unity and maturity; in short, a new sense of nation.

Despite justifiable pride in past military accomplishments, Canadians find the prospect of war ever more abhorrent, a feeling that has been reinforced by the losses suffered in two world wars and the Korean conflict. The advent of nuclear weapons has only added to the concern with which they view the possibility that Canada could again be caught up in a major armed struggle. Canadian security policy and the roles of the Forces must be widely and well understood, if the Forces are to enjoy the support they require.

To this end the Department has taken a number of steps to make more information more accessible to the public. It has established a National Defence Speakers Bureau, comprising senior military commanders, departmental managers and other experts. The Department is

A rescue operation by a Sea King helicopter.

producing informational material on defence issues and ensuring that it is effectively distributed. To bring Canadian Forces bases into closer contact with a greater number of Canadian communities, the Department has developed an expanded community relations program. The goal is to ensure that the facts on security are available to the Canadian public.

The Government's decision to put greater emphasis on the Reserves will build a more effective bridge between the Forces and society and tap a larger personnel pool. Revitalizing the Reserves will, in addition, provide young Canadians with skills and work experience, increasing their employment opportunities.

Since the Second World War, Canada has become much more diverse, both ethnically and culturally. The Canadian Forces, an institution which should be broadly representative of society as a whole, must reflect this diversity. The Department will continue to encourage participation in the Forces from all segments of society.

The Department must be institutionally bilingual and representative of both official language communities in Canada. Significant progress has been made over the past 16 years in providing a more balanced representation, both within the Canadian Forces and within the civilian component of the Department. Communication with the public in either official language is now generally available. Yet much more remains to be done, particularly in the language of work, before all employees can enjoy full and equitable career opportunities.

Changes in social roles, expectations and values pose enormous challenges to the Canadian Forces in their need to maintain discipline and cohesion. The Department of National Defence is in the forefront of responding to those developments. For example, three quarters of the military occupations are now open to women. There are approximately 7,800 women in the Regular Force. They represent a higher percentage than in any other NATO country except the United States. A further 4,200 are in the Primary Reserve. Moreover, the Government firmly believes that every Canadian must have equal rights and responsibilities in the defence of Canada. As announced in February, the Department is conducting a series of trials to determine how, when, and in which occupations and units the remaining restrictions on the employment of women in the Canadian Forces can be removed.

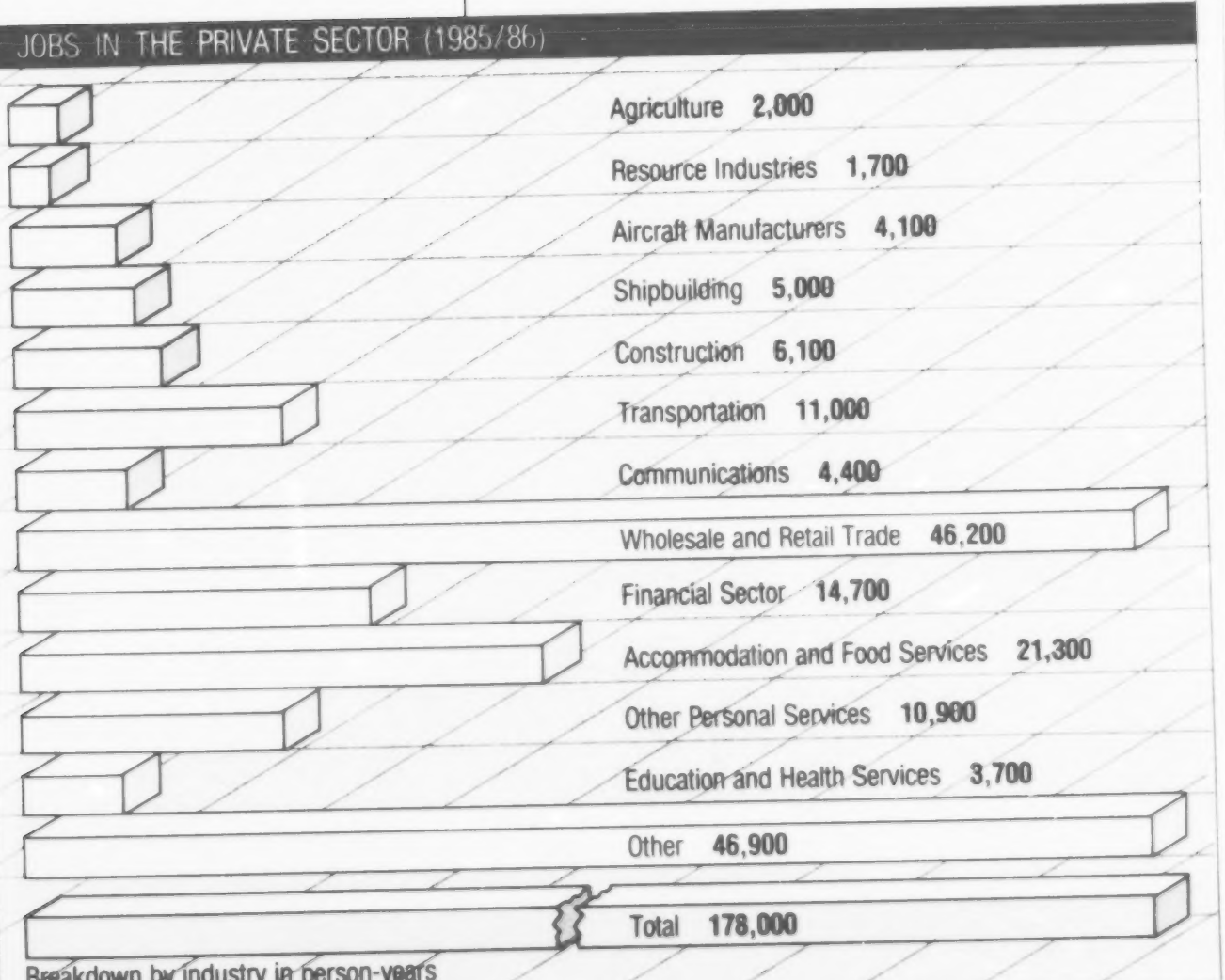
The proclamation of the Canadian Charter of Rights and Freedoms has contributed to an increased awareness, among all Canadians, of issues of individual rights and freedoms. The Department of National Defence has taken steps to ensure that its policies and practices comply with the Charter. Within the Canadian Forces, substantial changes have been made to the Code of Service Discipline to conform to the Charter-based legal rights. Major efforts have been made, and are continuing, to accommodate the equal rights guaranteed by the Charter. However, while society has become more concerned with individual rights and freedoms, the cohesive team effort required for successful military operations frequently demands that the needs of the group take

precedence. Thus, a careful balance must be found, within the law, between respect for individual rights and the needs of national security.

The Canadian Forces, while clearly having a distinct and different ethos, do reflect many of the tensions present in Canadian society. Pressures for social change and requirements for operational effectiveness are not always in harmony. While this is not necessarily a new phenomenon, the Government will strive to develop closer relations between the Forces and society at large.

Defence and the Economy

Defence expenditures in Canada contribute economic benefits to all sectors of Canadian society. In fiscal year 1985-86, Canadian defence spending accounted for approximately $12 billion of the Gross Domestic Product. It produced $1.6 billion in taxes and generated approximately 294,000 jobs, 178,000 in the private sector.



Breakdown by industry in person-years

The impact of defence spending is not confined to one area or sector, or to a narrow band of economic activity. It is, instead, felt throughout the entire economy and in all parts of the country. While it is true that at any given time a particular project may create more employment in, for example, the shipbuilding industry rather than the aircraft industry, an evaluation of economic and regional impact over time indicates that defence expenditures benefit all regions and economic sectors of the country.

As an illustration of the extent to which defence projects create jobs, it is anticipated that the current Canadian Patrol Frigate (CPF) and Tribal Update and Modernization (TRUMP) programs will generate about 34,100 person-years of employment between 1984 and 1992. Canadian firms, particularly the shipbuilding and electronics industries, will do about two thirds of the work. These programs will result in the development of new technical skills and contribute to the growth of small business jobs in Canada.

EXAMPLES OF JOBS GENERATED BY DEFENCE PROJECTS

(Person-years)	CPF	TRUMP
Project Management	3,000	800
Electronic Systems	6,000	4,000
Marine Systems	5,000	3,500
Shipbuilding	7,100	4,700
TOTAL	21,100	13,000

The Department of National Defence is both a producer and a consumer in the Canadian economy. Canadian defence spending contributes significantly to the maintenance of a robust and flexible economic environment. Defence purchases contribute to the development of internationally competitive Canadian industries.

By enhancing Canadian international competitiveness, defence expenditures allow us to take advantage of economic opportunities abroad in both defence and parallel non-defence industries. At the same time, the Department's participation in international trade gives Canadian manufacturers a channel to advertise Canada's capacity to produce the high-quality goods demanded by foreign buyers. Because of the pervasive nature of Canadian defence activity, Canada has an entree into a wide variety of foreign research, development and manufacturing processes.

The education and training of highly skilled workers essential to the operation of a modern economy is a further benefit of Canada's defence industrial base. In a situation where the demand for skilled personnel often exceeds supply, the Canadian Forces provide capable, experienced and disciplined individuals who can play vital roles in the civilian economy following their military service.

Defence programs also make a significant contribution to overcoming regional economic disparities. Over the years, it has frequently been possible to use scarce defence dollars to strengthen local and regional economies while at the same time satisfying defence requirements.

Search and Rescue

Following the Second World War, the Government assigned to the Royal Canadian Air Force the responsibility for Search and Rescue. The Canadian Forces now provide resources for both air and marine Search and Rescue operations and co-ordinate the response to all distress incidents in Canada and the surrounding ocean areas.

The National Search and Rescue System is responsible for an area of over 15 million square kilometres. At present, Rescue Co-ordination Centres are located in Halifax, Trenton, Edmonton and Victoria, and are staffed by Canadian Forces personnel and Canadian Coast Guard officers. These centres have at their disposal dedicated resources, which include specially equipped Canadian Forces fixed-wing aircraft and helicopters, ground search parties at specified Canadian Forces bases and stations, and Canadian Coast Guard surface vessels and hovercraft. Other resources include Regular and Reserve squadron aircraft and ships of the Canadian Forces, and vessels of the Department of Fisheries and Oceans. Additionally, the Royal Canadian Mounted Police, the Department of Indian and Northern Affairs and the Department of Energy, Mines and Resources also assist in Search and Rescue operations when feasible, as do numerous individuals and private organizations.

The Canadian Forces constantly improve their all-weather search and rescue capability. The Search and Rescue Satellite-Aided Tracking System (COSPAS-SARSAT) is an international space-based distress signal detection system involving France, the United States, the Soviet Union, Canada and others. This system, which has strong Canadian support and industrial participation, has already been credited with saving more than 700 lives worldwide. In addition to improving equipment and exploiting new technologies, the Search and Rescue program is more effectively utilizing national resources through such organizations as the Civil Air Search and Rescue Association and the Canadian Marine Rescue Auxiliary. The Canadian Forces will continue to play a central role in the National Search and Rescue System.

Foreign Disaster and Humanitarian Relief

The Canadian Forces have, on request, provided humanitarian and philanthropic assistance to those in need in a number of Third World countries. This aid has been given primarily through the transport of needed supplies, such as powdered milk, medical and dental supplies, ambulances, clothing and school books. It has also included mercy flights, medical evacuations and specialized search and rescue personnel.

The humanitarian assistance provided in the past has been an important contribution to the alleviation of human suffering. More needs to be done. Accordingly, the Government intends to be even more active in using the Canadian Forces for humanitarian disaster relief abroad. In conjunction with the Department of External Affairs or the Canadian International Development Agency, the Department of National Defence will consider requests from governments of countries where disasters have occurred, and will be prepared to provide support in the form of air and sea transport, helicopters, tents, field hospitals, medical supplies, portable communications equipment and other emergency items. Canadian Forces personnel will also be made available to provide engineering, medical and other specialized services, and to operate equipment.

A C-130 Hercules unloads food in Ethiopia during the famine.

Canadian Forces personnel provide assistance in natural disasters.

Assistance to Civil Authorities and Civilian Organizations

The Canadian Forces play an important role in supporting civil authorities charged with enforcing Canadian laws. For example, they assist the Department of Fisheries and Oceans in the surveillance of the 200-mile Extended Fishing Zone and the enforcement of Canadian fisheries laws in that zone when coercive assistance is required. Arrangements exist to provide a similar service to the RCMP in their role of interdicting illegal drugs. The Canadian Forces are also called upon to provide emergency assistance to Canadians in cases of disaster such as floods, forest fires and landslides. The Department of National Defence is working with other departments to improve the availability and effective employment of the Canadian Forces in these roles.

Cadets

The Department of National Defence operates and supports organizations for both male and female cadets between the ages of 12 and 19. It does so in partnership with the Navy League, the Army Cadet League and the Air Cadet League of Canada. There are about 60,000 Royal Canadian Sea, Army and Air Cadets in 1,090 cadet corps and squadrons spread across the country. Approximately 22,000 of these cadets acquire leadership and specialty training skills each summer at camps in Canada and overseas.

The cadet organizations provide young Canadians with excellent training emphasizing leadership, physical fitness and service to the community. In fostering civic responsibility, cadet training makes an invaluable contribution to the nation and one which the Department will continue to support to the full.

Sea Cadets from Quebec aboard ship.

X Conclusion

"...three elements are indispensable to a nation: people, territory and a navy. But military strength is the keystone that is essential to the structure."

George Étienne Cartier

Canadians have been blessed by geography and history. It has been more than 170 years since this country was invaded by a foreign power. Canada as a nation has never suffered occupation. In war, we have always shared in the fruits of victory and have been spared the bitter taste of defeat. Canadian reactions to international security issues have been conditioned by these geographic and historical realities.

Canadians tend to approach international relations optimistically, assuming the best of others. Few Canadians feel militarily threatened and most have difficulty imagining anyone as an enemy. While accepting the necessity of a defence effort, we do not expect to have to resort to force of arms to resolve our problems.

This White Paper has sought to remind Canadians that the world is not always as benign or predictable as we would wish, that the spectre, if not the reality, of violence is ever-present and that those who do not look to their own military forces can become the victims of the forces of others.

Since coming to office, the Government has reviewed our defence effort. This review has confirmed that Canadian defence policy, as it has evolved since the Second World War, is essentially sound. That policy will continue to be based on a strategy of collective security within the framework of the North Atlantic Alliance, including the continental defence partnership with the United States. Canada will continue to support that strategy through military contributions in North America, in Western Europe and at sea.

Our examination revealed that the primary means with which Canadian security policy is implemented, the Canadian Forces, have been sadly neglected. Failure to provide modern equipment has undercut the credibility of the Canadian Forces, weakening Canada's contribution to deterrence and collective defence. Moreover, if Canadian men and women ever had to go into combat with the aged equipment they currently possess, lives would be needlessly lost.

Decades of neglect must be overcome. The Government is determined to do so through coherent and consistent leadership and by a steady, predictable and honest funding program. For the future, we will take a number of initiatives which will represent a significant and visible increase in the effectiveness of the Canadian Forces. We will create a modern navy capable of operating in the Atlantic, the Pacific and the Arctic. We will bolster our capacity for surveillance and defence of Canadian territory. We will revitalize and enlarge the Reserves so that they can assume a greater role in the defence of Canada. We will consolidate our land and air commitments in Europe on the central front, thereby providing a more credible and sustainable contribution to collective security.

The Government will implement this program vigorously. Over time, our endeavours will produce a defence posture responsive to the challenges of the 1990s and beyond. Canadian security and sovereignty will be better served. Canada will become a more responsible ally. We will then have a firmer basis from which to contribute to peace and freedom.

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